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TWENTY-FOURTH BIENNIAL REPORT
OF THE
NORTH CAROLINA
STATE BOARD OF HEALTH

JULY 1, 1930—JUNE 30, 1932

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TWENTY-FOURTH BIENNIAL REPORT

OF THE

NORTH CAROLINA STATE BOARD OF HEALTH



JULY 1, 1930—JUNE 30, 1932

MEMBERS OF THE STATE BOARD OF HEALTH

Elected by the North Carolina Medical Society

CARL V. REYNOLDS, M.D.

Term expires 1935

G. G. DIXON, M.D.

Term expires 1935

L. B. EVANS, M.D.

Term expires 1933

S. D. CRAIG, M.D.

Term expires 1933

Appointed by the Governor

J. T. BURRUS, M.D.

Term expires 1933

H. LEE LARGE, M.D.

Term expires 1935

J. N. JOHNSON, D.D.S.

Term expires 1933

H. G. BAITY, Ph.D.

Term expires 1935

J. A. GOODE, Ph.G.

Term expires 1933

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LETTER OF TRANSMITTAL

RALEIGH, N. C., November 15, 1932.

His Excellency, O. MAX GARDNER,
Governor of North Carolina.

MY DEAR SIR:—Under authority of Chapter 118, Article 1, Section 7050, Consolidated Statutes of North Carolina, I have to submit to you for transmission to the General Assembly the Biennial Report of the State Board of Health for the period July 1, 1930, to June 30, 1932.

Yours sincerely,

JAMES M. PARROTT,
Secretary and State Health Officer.

TABLE OF CONTENTS

The Chronological Development of Public Health Work in North Carolina	7
Report of the Secretary-Treasurer and State Health Officer.....	27
The North Carolina State Laboratory of Hygiene.....	32
Division of Preventive Medicine.....	35
Division of Sanitary Engineering.....	38
Division of County Health Work, Epidemiology and Vital Statistics.....	42
Annual Report of the North Carolina State Board of Health to Con- joint Session, State Medical Society, April 22, 1932.....	65

THE CHRONOLOGICAL DEVELOPMENT OF PUBLIC HEALTH WORK IN NORTH CAROLINA

In the seventies Dr. Thomas Fanning Wood, of Wilmington, caught the vision of the possibilities of public health work to North Carolina. How fully he grasped the far-reaching consequences of his idea, how clearly he saw the ever-growing hosts of lives saved as a result of his vision and inspiration, we shall never know. We do know that the vision never left him, and that under its sway he worked, through the Medical Journal which he edited and through the North Carolina State Medical Society until his influence reached the people of the State in their General Assembly of 1877, with the effect that on February 12, 1877, the North Carolina State Board of Health was born. Ours was the twelfth State board of health to be established.

Without treating the development of the newly-established board with that thoroughness that could be termed history, we think if enough to set down here in chronological order the principal events in the life and growth of the North Carolina State Board of Health.

1877. Board created by the General Assembly. Consisted in the beginning of entire State Medical Society. Society acted through a committee. Annual appropriation, \$100.
1878. First educational pamphlet issued. Subject, "Timely Aid for the Drowned and Suffocated." Annual appropriation, \$100.
1879. The General Assembly reconstituted the Board of Health. Made it to consist of nine members; six appointed by the Governor, three elected by the State Medical Society. Term of office, five years. Dr. Thomas F. Wood elected first Secretary of the Board, May 21. Dr. S. S. Satchwell was first President of the Board. Other legislative provisions: (1) Chemical examination of water, and (2) organization of county boards of health, composed of all regular practicing physicians and, in addition, the mayor of the county town, the chairman of the board of county commissioners, and the county surveyor. Four educational pamphlets issued. Subjects: "Disinfection, Drainage, Drinking-Water, and Disinfectants;" "Sanitary Engineering;" "Methods of Performing Post-mortem Examinations;" "Limitation and Prevention of Diphtheria." Annual appropriation, \$200.
1881. General Assembly passed a law requiring regulation of vital statistics at annual tax listing; law ineffective. Annual appropriation, \$200.
1885. General Assembly made county boards of health more efficient; allowed printing privileges not to exceed \$250 annually. Annual appropriation, \$2,000.
1886. The Health Bulletin made its appearance in April. Pamphlet on "Care Eyes and Ears," by Dr. Richard H. Lewis, printed and distributed.

1888. Yellow fever epidemic in Florida and refugees to Western North Carolina demonstrated value of a Board of Health to cope with situation. Annual appropriation, \$2,000.
1892. Dr. Thomas F. Wood, the Secretary of the Board, died August 22. Dr. Richard H. Lewis elected Secretary to succeed Dr. Thomas F. Wood, September 7. Annual appropriation, \$2,000.
1893. Legislative provisions: (1) Laws improving the reporting of contagious diseases, (2) the protection of school children from epidemics, (3) protecting the purity of public water supplies, and (4) regulation of common carriers. Legislature provided that Governor appoint five of the nine members of the Board of Health, that the State Medical Society elect four, and that the term of office of the members of the State Board of Health be from five to six years. The \$250 printing limit was removed. Pamphlet on quarantine and disinfection was prepared and reprinted by many of the State papers. Annual appropriation, \$2,000.
1894. A number of public health conferences were arranged and held in different towns of the State. Bulletin was increased from a mailing list of 800 to 1,200. Annual appropriation, \$2,000.
1895. Dr. Albert Anderson and Dr. W. T. Pate were elected bacteriologists for the board. Annual appropriation, \$2,000.
1896. Board passed a resolution requiring chemical and bacteriological examinations of municipal water supplies. Dr. Venable of Chapel Hill, undertook the chemical examination, and Drs. Anderson and Pate the bacteriological examination. Board also directed Mr. John C. Chase, the engineer member, to inspect all municipal water plants in the State. Annual appropriation, \$2,000.
1897. General Assembly enacted law requiring county superintendents of health to be elected by county commissioners and reduced term of office to one year. Annual appropriation, \$2,000.
1899. General Assembly improved the laws protecting public water supplies. Smallpox prevailed extensively in the State. Dr. Henry F. Long, and later, on Dr. Long's resignation, Dr. Joshua Tayloe were employed to travel over the State, consulting with and advising the local sanitary authorities as to proper means for protecting the public. Annual appropriation, \$2,000.
1900. State Board of Agriculture, on request of State Board of Health, agreed to examine samples of water from public water supplies until Board of Health could provide its own examiner. Annual appropriation, \$2,000.
1901. State Board of Embalmers, with representatives of State Board of Health, established. County health work placed in the hands of county sanitary committees composed of county commissioners and two physicians which commissioners elected to serve with them. Term of office of county superintendent of health made two years. Annual appropriation, \$2,000.
1903. General Assembly enacted law permitting Board of Health to charge \$5 for each analysis of a public water supply, this fee

to be used in paying Department of Agriculture for services of examiner. Dr. C. W. Stiles, U. S. P. H. S., before the State Medical Society at Hot Springs, called attention to prevalence of hookworm disease in the South. Dr. J. L. Nicholson and Dr. W. S. Rankin, working under State Board of Health during fall of 1903 and spring of 1904, showed great prevalence of this disease in North Carolina. Annual appropriation, \$2,000.

1904. A stenographer was employed. One hundred and twenty thousand pamphlets on tuberculosis were printed and distributed. There was a renewal and an extension of cooperative work between the Board of Health and the State press, a number of articles dealing with hygienic and sanitary subjects being furnished the papers and published in them. Annual appropriation, \$2,000.
1905. General Assembly established State Laboratory of Hygiene; imposed water tax of \$64 on all public water companies; voted \$600 annually for support of Laboratory. Small appropriation made it necessary for the Department of Agriculture to continue to assist State Board of Health. Annual appropriation, \$2,000.
1906. The North Carolina Association for the Study and Prevention of Tuberculosis was organized. Annual appropriation, \$2,000.
1907. Two thousand dollars appropriated for the State Laboratory of Hygiene. Pasteur treatment provided. State Sanatorium for treatment of tuberculosis founded; \$15,000 appropriated for permanent improvements and \$5,000 for maintenance. A law requiring the separation of tuberculosis prisoners from other prisoners was enacted. Annual appropriation, \$4,000.
1908. January 1, Dr. C. A. Shore became Director of State Laboratory of Hygiene. Annual appropriation, \$4,000.
1909. General Assembly provided for (1) whole-time State Health Officer; (2) collection of vital statistics of towns having a population of 1,000 or over; (3) that all public water companies file plans and specifications of their plants with the State Board of Health, and that the State Board of Health pass necessary rules and regulations for the care of public watersheds and plants and furnish such rules and regulations and other advice to those having charge of public water supplies; (4) that counties provide free diphtheria antitoxin for county indigents, and (5) that the maintenance appropriation for the Sanatorium be increased from \$5,000 to \$7,500, and an additional \$30,000 be granted for permanent improvements. Dr. Richard H. Lewis resigned as Secretary of the Board, and Dr. W. S. Rankin was elected as his successor, beginning his official work July 1. Annual appropriation, \$10,500.
1910. General effort to interest the people and State organizations in public health work. Bulletin increased from 3,500 edition to 10,500 edition. Addresses on public health work delivered to Conference of County Superintendents of Schools, State Federation of Women's Clubs, State Press Association, and Sanitary Sunday observed in April. Dr. John A. Ferrell elected, Feb-

ruary, Assistant Secretary for Hookworm Eradication; began work under State Board of Health and Rockefeller Sanitary Commission.

1911. Legislature established county boards of health to take the place of the county sanitary committees; county board of health composed of chairman board of county commissioners, county superintendent of schools, mayor of county town, and two physicians selected by the three county officials to serve with them. Legislature also abolished quarantine for smallpox and improved the quarantine laws. One thousand dollars annually appropriated to contract with antitoxin manufacturers for State supply of high-grade diphtheria antitoxin, with result that price of antitoxin was cut to one-fourth former price, saving the citizens of the State over \$30,000 annually. Bulletin increased from 11,500 copies to 20,000 copies each edition; closer cooperation with press of State developed; regular weekly press articles prepared and sent to papers; increase in numbers of popular pamphlets for distribution. Hookworm work this year largely educational through the school forces and investigative through county dispensaries; thousands of children found infected and treated. Strong sentiment began to make itself felt for better health work by counties, four counties employing whole-time county health officers. Guilford County—one of the four—began its work June 1 and was the first county in the United States to inaugurate full time county health work. Maintenance appropriation for State Sanatorium increased to \$12,500, with \$20,000 voted for permanent improvements. Annual appropriation, \$22,500.
1912. Bulletin increased to 40,000 edition; number of popular pamphlets dealing with different diseases increased; press work improved; educational work of Board along all lines amplified. Secretary of Board of Health called attention of conjoint meeting of State Medical Society and State Board of Health to the relative importance of health problems and the bearing of this subject upon the proper apportionment of health funds; instrumental in passing a resolution to the effect that pellagra was an interstate problem, not a State problem, and requesting the Federal Government to deal with pellagra as a Federal problem; resolution responsible, to considerable extent, for successful effort on part of Hon. John M. Faison's securing Congressional appropriation of \$45,000 for the study of pellagra by the Federal Government. Hookworm work extended and county funds appropriated to supplement State and Rockefeller Foundation for this work. Annual appropriation, \$22,500.
1913. General Assembly passed Model Vital Statistics Law with \$10,000 appropriation for its enforcement. County superintendents of health changed to either county physician or county health officer, depending on whether part-time or full-time service. Educational efforts of Board continued and enlarged. Hookworm

work along same line as year before increased in amount. Dr. John A. Ferrell resigned as Assistant Secretary to accept position with the central office of the Rockefeller Sanitary Commission in Washington, D. C. Dr. C. L. Pridgen succeeded Dr. Ferrell. The movement for improved county health work had by this time resulted in ten counties electing whole-time county health officers. The State Sanatorium for Treatment of Tuberculosis turned over by Extra Session of 1913 to the management of State Board of Health. Annual appropriation, \$40,500.

1914. Preceding work of the Board continued. Board of Health took over management of Sanatorium; started out under many difficulties on account of the institution owing many debts and the appropriation being limited. Hookworm work changed to community work directed to the installation of sanitary privies in all homes. Laboratory began to produce and distribute free anti-typhoid vaccine. Dr. C. L. Pridgen resigned as Director Hookworm Eradication, and Dr. W. P. Jacocks succeeded him. Annual appropriation, \$40,500.

1915. General Assembly makes State vital statistics law conform to National model by requiring burial permits in rural communities; enacts legislation permitting county commissioners and towns and cities to appropriate money for support of tuberculosis citizens in State Sanatorium; provides \$15,000 for purchase and building of antitoxin plant; appropriates \$60,000 for payment of Sanatorium debts and new buildings and other improvements, and \$25,000 annually for maintenance and \$10,000 for extension anti-tuberculosis work. Educational work greatly extended: Bulletin now 47,000; traveling public health exhibit shown at fairs and other assemblages; press work greatly developed through employment of Miss Kate Herring, a journalist for her whole time; stock lectures with lantern slides supplied public speakers in different parts of the State; community soil pollution work under Dr. W. P. Jacocks stops in April, and Bureau of Rural Sanitation, with Dr. G. M. Cooper at its head, succeeds, beginning work May 1. Considerable amount of work done for improvement of prison conditions. The unit system of county health work gets a good start; over 52,000 people given three complete vaccinations against typhoid fever, and medical inspection of schools put on in six counties. Annual appropriation, \$50,500.

1916. North Carolina was admitted to the Registration Area for deaths. To the educational agencies of the Board was added a self-supporting moving picture health show. Many saw this show during the year, and, seeing, believed in health work as never before. Bulletin reached 51,000 edition. Cooperation with University in developing a plan and putting on a home post-graduates course in medicine, giving first course to 169 doctors. Put into operation an optional system of hotel inspection, with grading and publishing scores. Continued Bureau of Rural

Sanitation, giving three anti-typhoid injections to 48,000, making 100,000 immunized in summers of 1915 and 1916. Did complete medical inspection of six counties and with inspection a large amount of educational work as to sanitary and hygienic living. Secured effort by Federal Children's Bureau to develop unit of child hygiene work, the Bureau using two employees to work in Cumberland and Swain counties for about eight months. Laboratory of Hygiene buys land and erects its own building. Annual appropriation, \$55,500.

1917. The General Assembly passed the following important health legislation: Chapter 263, entitled "An act to prevent and control the occurrence of certain infectious diseases in North Carolina;" Chapter 244, entitled "An act to provide for the physical examination of the school children of the State at regular intervals;" Chapter 276, entitled "An act for the cooperative and effective development of rural sanitation;" Chapter 257, entitled "An act to prevent blindness in infancy, designating certain powers and duties and otherwise providing for the enforcement of this act;" Chapter 66, entitled "An act to provide for the sanitary inspection and conduct of hotels and restaurants;" Chapter 286, entitled "An act to regulate the treatment, handling and work of prisoners."

Following the enactment of this legislation, administrative machinery, consisting of a Bureau of Epidemiology under the direction of Dr. A. McR. Crouch, a Bureau for the Medical Inspection of Schools under the direction of Dr. Geo. M. Cooper, and a Bureau for County Health Work, under the direction of Dr. B. E. Washburn, was established. Dr. Washburn, an officer of the International Health Board, was loaned to the State without cost and the International Health Board, in addition to furnishing Dr. Washburn, appropriated \$15,000 annually for County Health Work in accordance with the provisions of Chapter 276.

The United States Public Health Service in February, 1917, detailed Dr. K. E. Miller to study county health work in different sections of the country and to establish for demonstration purposes, in Edgecombe County, department of health on an economic basis easily within the financial reach of the average county.

The State Laboratory of Hygiene moved into its own building January 15, 1917.

The State was admitted to the registration area of the Union for births in January, 1917, the Bureau of the Census having found after investigation that our birth registration was 96 per cent complete.

The special campaign against typhoid fever begun so satisfactorily in 1915, was continued. Free vaccination of the people, however, was interfered with by the difficulty in securing medical officers to do the work, the preparedness program of the Government having caused many physicians and nurses to

enter the army and navy; nevertheless, a total of 30,000 citizens of the State were vaccinated as a direct result of the Board's activities, and many thousands of others were vaccinated by the physicians of the State as a result of the educational work of the Board directed to impressing the people with the value of vaccination as a means of prevention for typhoid fever.

In December, 1917, life extension work, which consisted briefly of the free physical examination of interested citizens for the purpose of advising them as to their physical condition and needed hygienic reform and medical treatment, was begun on a county basis. The funds necessary for this work were appropriated partly by the State and partly by the counties in which the life extension work was carried out. Dr. Amzi J. Ellington, of Raleigh, who at the time was a resident physician in the New York City Hospital, was employed and placed in charge of the work. Life extension work was carried out in Vance, Alamance, Lenoir and Robeson counties, and resulted in the full physical examination of 4,000 citizens. This work was very favorably received, and the outlook for its continued development seemed excellent when, with the declaration of war and the call for physicians to enter the military service of the country, Dr. Ellington enlisted in the Medical Corps of the Army. For this reason, and for the further reason that it has been almost impossible to secure health officers during the past two years, the work was not resumed.

The educational work of the State Board of Health consisted in the issuance of eight issues of the Monthly Health Bulletin, each monthly edition amounting to 45,000, and a daily newspaper health article. The Bureau continued its moving picture show exhibit. Arrangements were made for the preparation of newspaper plate, which was sent to and extensively used by 202 papers having a total circulation of 303,000.

The annual appropriation for the State Board of Health was \$60,772.16. The annual appropriation for the State Laboratory of Hygiene was \$12,500, and this, in addition to \$9,087.22 in fees permitted under the laws of the State to be paid to the Laboratory for special work, provided the Laboratory with a total annual budget of \$21,587.22.

1918. Much of the work this year was influenced by the war and had to do with preparedness. The State Health Officer visited Washington, at the request of the Council of National Defense and as chairman of a committee of State Health Officers, on a number of occasions for conferences with respect to preparedness measures, provisions for the control of venereal diseases, arrangements for coordinating the control of infectious diseases in the civilian population with their control in cantonments, and to arrange, if possible, with the Public Health Service and the Surgeon-General of the Army for preserving the personnel of State health departments during the war.

Considerable time was given to assisting Major John W. Long, Medical Aide to the Governor, in the work of organizing the Medical Advisory Boards and in interesting physicians in entering the medical service of the Army and Navy, and, later in the year, in inducing the physicians of the State to become members of the Volunteer Medical Service Corps.

Partly as a result of these activities, the Surgeon-General of the Army assigned Major Joseph J. Kinyoun to assist the State Board of Health in the control of communicable diseases, the Board being under no financial obligation for Major Kinyoun's assistance; and as a result of the successful termination of the activities of various interests looking to a more effective control of venereal diseases, the Kahn-Chamberlain Bill passed Congress, and made available to the State of North Carolina, and without condition \$23,988.61 for venereal disease work.

The Laboratory during this year began the distribution of a high grade of diphtheria antitoxin.

The Bureau of Medical Inspection of Schools, under the direction of Dr. G. M. Cooper, developed, and with a degree of success that we may say established, free dental clinics for the public schools of the State. The Bureau also developed to a successful extent an arrangement in the form of adenoid and tonsil clubs for the practical and economic treatment of public school children suffering from these defects.

The Bureau of Epidemiology employed two third-year medical students, equipped them with motorcycles, and put them into the field to investigate infringements of the quarantine law. Sufficient convictions were obtained to impress the people with the determination of the State to enforce its health laws, and a fairly satisfactory compliance with the laws regarding the reporting of communicable diseases was brought about.

The Bureau of Venereal Diseases, paid for by the Federal appropriation, was established in September under the directorship of Dr. James A. Keiger.

Mr. Warren H. Booker, for the last seven years the efficient director of the Bureau of Engineering and Education, left in September for Red Cross work in France, the work of his bureau being continued, with the exception of the engineering work, by Mr. Ronald B. Wilson, who had been employed earlier in the year to succeed Miss Herring in assisting Mr. Booker with the journalistic work, Miss Herring having been engaged by the War Department for educational work.

Perhaps the most outstanding feature of the health work during the year 1918 was the epidemic of influenza. The epidemic began early in October and caused in October alone 6,056 deaths; in November 2,133 deaths; and in December 1,497 deaths, a total during the last three months of 9,686 deaths.

The annual appropriation for the State Board of Health for 1918 was \$73,210.38.

The annual appropriation for the State Laboratory of Hygiene was \$12,500. The Laboratory, during this year, collected \$8,532.48 in fees for special work, so that the total income of the Laboratory for this year was \$21,032.48.

1919. The General Assembly passed the following important health legislation: Chapter 71, entitled "An act to prevent the spread of disease from insanitary privies;" Chapter 192, entitled "An act to provide for the physical examination and treatment of the school children of the State at regular intervals;" Chapter 206, entitled "An act for the prevention of venereal diseases;" Chapter 213, entitled "An act to require the provision of adequate sanitary equipment for public schools;" Chapter 214, entitled "An act to obtain reports of persons infected with venereal diseases;" Chapter 215, entitled "An act to amend Chapter 671, Public-Local Laws of 1913, relating to the injunction and abatement of certain nuisances."

The Bureau of Engineering and Inspection was organized in April. The engineering work of the Board had been suspended with the resignation of Mr. Warren H. Booker in September, 1918, Mr. Booker having gone to France to engage in tuberculosis work under the direction of the Red Cross. Between September, 1918, and April, 1919, the engineering problems coming before the Board had been referred and very kindly and effectively taken care of by Col. J. L. Ludlow of Winston-Salem, the engineer member of the Board. Mr. H. E. Miller, an engineer and a graduate of the University of Michigan, was placed in charge of the new bureau, and his brother, Dr. K. E. Miller, of the United States Public Health Service, was detailed by the Service to assist him in the organization of his work. Mr. H. E. Miller and Dr. K. E. Miller spent the spring and summer and a part of the fall in studying various types of privies, in preparing plans for the construction and maintenance of privies, and in preparing the necessary notices and literature to inform the people of the objects and requirements of the new privy law.

On May 1 Dr. A. J. Warren, health officer of Rowan County, was appointed to and accepted the position of Assistant Secretary of the Board.

About the first of the year Miss Herring returned to the educational work of the Board. After a few months she returned to the Federal Service and Mr. R. B. Wilson, who had left the Board work upon Miss Herring's return, was again offered a place with the Board. Mr. Wilson accepted and assumed his duties on July 1.

On August 1 Dr. A. McR. Crouch, Director of the Bureau of Epidemiology, resigned to accept a position with the city of Wilmington. Dr. F. M. Register, whole-time health officer of Northampton County, succeeded Dr. Crouch as director of the bureau.

In September Dr. J. R. Gordon, Director of the Bureau of Vital Statistics since 1914, resigned on account of impaired health, and on October 1st the Bureau of Epidemiology and the Bureau of Vital Statistics were combined and placed under the direction of Dr. Register.

In September Mrs. Kate Brew Vaughan, Director of the Bureau of Infant Hygiene, resigned. The bureau was reorganized under an understanding with the American Red Cross and was enlarged to include, in addition to infant hygiene, the problem of public health nursing, the name of the bureau being changed to that of "Bureau of Public Health Nursing and Infant Hygiene." Under the agreement with the Red Cross this bureau was to have an available appropriation of \$12,000 a year, half of which was to be furnished by the American Red Cross and half by the State Board of Health. The personnel of the bureau and its plan of work, under the agreement, was made contingent upon the approval of both participating agencies, the American Red Cross and the State Board of Health. In December Miss Rose M. Ehrenfeld took charge of the new bureau and began its organization and work.

On October 1 Dr. Jas. A. Keiger, Director of the Bureau of Venereal Diseases, resigned and Dr. Millard Knowlton was appointed to succeed him.

The typhoid campaign carried on during the summer through previous years, was continued in the summer of 1919, using third-year medical students, furnished either with automobile or motorcycles for getting about. Campaigns were carried out in the following counties: Bertie, Cabarrus, Chatham, Chowan, Columbus, Craven, Hertford, Iredell, Johnston, Lincoln, Onslow, Pasquotank, Perquimans, Randolph, Richmond, Rockingham, Stanly, Union, Warren, Wayne. A total of 49,076 were given complete vaccination.

The educational work of the Board consisted of the publication of a 48,000 monthly edition of the Bulletin, and the distribution of about 350,000 pieces of public health literature.

The funds available during this fiscal year amounted to \$198,549.14, of which \$102,301.98 was from State appropriations and the remainder from outside sources.

The appropriation for the State Laboratory of Hygiene for this year was \$28,500; in addition to this, the Laboratory collected in fees for special work, for antitoxin, and in water taxes a total of \$14,344.02, making a total of \$42,844.02 available for work of Laboratory.

1920. During this year there was a Special Session of the General Assembly, lasting twenty days and held in the latter part of August. This Special Session passed an act amending the vital statistics law, making the fees for local registrars 50 cents instead of 25 cents for each certificate properly filed with the State Board of Health.

On January 1 Dr. B. E. Washburn, who had had general direction of the cooperative county health work and who had rendered most acceptable service, was recalled by the International Health Board and detailed to take charge of their interests in Jamaica. Dr. K. E. Miller, of the United States Public Health Service, who had been detailed in January, 1917, to organize a model county health department in Edgecombe County and then, in 1919, to assist his brother, Mr. H. E. Miller, in organizing the work of the new Bureau of Engineering and Inspection, to which was assigned the duty of enforcing the State-wide privy act, succeeded Dr. Washburn as Director of the Bureau of County Health Work.

In January a cooperative effort with the United States Public Health Service and the International Health Board to demonstrate the possibilities and advantages of the eradication of malaria from certain towns and cities in the eastern part of the State was begun. The terms of cooperation were that the International Health Board and the State Board of Health were to pay one-half of the expenses of the local work and the town or city in which the work was done the other half, the Public Health Service furnishing, as its part, expert supervising personnel. The towns and cities chosen for this work were Goldsboro, Farmville, and Greenville, the budgets for each municipality being, respectively, Goldsboro, \$13,670.98; Farmville, \$5,000; and Greenville, \$9,000, a total investment in this work of \$27,670.98. Mr. A. W. Fuchs, Associate Sanitary Engineer, was detailed by the Service to have supervision of the work.

In February Dr. A. J. Warren, Assistant Secretary of the State Board of Health, resigned his position in order to accept the appointment of city health officer of Charlotte, N. C.

In the winter and spring of 1920, the North Carolina Landowners' Association, under the progressive leadership of Mr. W. A. McGirt, of Wilmington, undertook a very extensive educational campaign against malaria, which was carried on through the public schools of thirty-eight counties in eastern North Carolina. A series of county and State prizes for the best essay on malaria by public school children were offered as an inducement to the school children to interest and inform themselves, and, indirectly, their parents, with regard to the importance of this disease. To make possible this work by the school children 75,000 malaria catechisms, prepared by Dr. H. R. Carter, of the United States Public Health Service, were distributed through the public schools of the eastern part of the State to the school children. Thousands of essays were written, and it is reasonable to believe that the campaign was one of the most successful public health educational attempts yet undertaken.

In June it was found advisable to separate the Bureau of Epidemiology and the Bureau of Vital Statistics which had, on

account of the scarcity of health officers, been placed under the directorship of a single bureau chief, Dr. F. M. Register. Dr. Register was appointed Director of the Bureau of Vital Statistics and Dr. J. S. Mitchener was appointed Director of the Bureau of Epidemiology.

In April the Interdepartmental Social Hygiene Board assigned to the State Board of Health several workers for making a study of vice conditions in North Carolina towns and cities and for taking such steps as were found expedient for decreasing prostitution. This group of workers was withdrawn in September, on account of differences developing between them and Dr. Knowlton, chief of the Bureau of Venereal Diseases, with the understanding that another group of workers would be assigned to this work at a later date.

In June arrangements were made with the United States Public Health Service and the American Social Hygiene Association for the development of an elaborate educational unit on sex hygiene and venereal diseases designed to reach rural meetings through the use of picture films and a portable truck. An outfit consisting of several lectures and a moving picture truck began work in Cumberland County in August, and from its very beginning met a most cordial reception and gave every promise of developing into one of the most useful agencies for dealing with the venereal disease problem.

During the year the anti-typhoid vaccination campaign was continued in Alamance, Bladen, Columbus, Duplin, Franklin, Gaston, Harnett and Mecklenburg counties. Cooperative campaigns, in which the counties furnished the working personnel, were also carried on in Anson, Johnston and Rutherford counties. A total of 29,435 citizens have been vaccinated against the disease, and this does not include Columbus County, in which the work was just beginning when this report was completed.

The educational work of the State Board of Health during this year consisted of a 48,000 monthly edition of the State Board of Health Bulletin and the distribution of approximately 350,000 pieces of public health literature.

The funds available during this fiscal year amounted to \$342,284.33, of which \$176,152.61 was State appropriation and the remainder from outside sources.

The appropriation for the State Laboratory of Hygiene for this year was \$25,000; in addition to this, the Laboratory collected in fees for special work, for antitoxin and in water taxes, a total of \$13,698.89, making a total of \$38,698.89 available for the work of the Laboratory. The above amount being insufficient, the Special Session of the Legislature authorized a loan of \$15,000 to enable the work of the Laboratory to be carried on, making a total of \$53,698.89 available for the work of the Laboratory during this year.

1921. The Legislature meeting early in January of this year was asked by the Board to amend the State law restricting the salary of the executive officer of the Board to \$3,000 annually, so as to make the salary \$5,000. Such an amendment was passed. A further request from the Board was that legislation be enacted removing the inspection tax of forty cents from privies coming under the supervision of the Board of Health. Such an amendment to the State-wide Privy Law was also enacted. A bill was introduced in this session of the General Assembly under the initiative of Hon. Emmet H. Bellamy requiring a physical examination of all applicants for marriage and making issuance of license contingent upon the physical qualifications of the applicant. The State Board of Health approved and supported Mr. Bellamy's bill, realizing, as did the author of the bill, that the proposed legislation was but a step in the right direction and was, therefore, rather loosely drawn and left many things to be desired. The bill finally passed in amended form as Chapter 129, Public Laws of 1921.

The Governor appointed Mr. Chas. E. Waddell, an engineer, of Asheville, to succeed Col. J. L. Ludlow as the engineer member of the Board.

Perhaps the most important change inaugurated in State health administration during this year was the adoption of a cost basis for standardizing and measuring the efficiency of public health work in those counties in which the State participated financially. This new principle is fully described in the State Board of Health Bulletin for January, 1922, and a further discussion of cost basis for public health work is unnecessary here except, perhaps, to say that it is apparently at least one of the first attempts to introduce the cost system of industry into government.

The Bureau of Venereal Diseases, in charge of Dr. Millard Knowlton, established as a part of the war-time activities of the Board in cooperation with the Bureau of Venereal Diseases of the Federal Government, was combined with and made a part of the work of the Bureau of Epidemiology, under the general direction of Dr. J. S. Mitchener.

Funds available for the year included: State appropriation, \$275,000; miscellaneous receipts, \$164,184.42; total, \$439,184.42.

1922. In order to bring the records of this department into harmony with those of other State departments, in accordance with the Act of the General Assembly of 1921, changing the fiscal year of the State so as to begin on July 1st each year, this report ends with June 30, 1922. It, therefore, covers a period of nineteen months; one full fiscal year from December 1, 1920, to November 30, 1921; seven months from December 1, 1921, to June 30, 1922. Effective February 1, the American Red Cross Society abrogated the agreement existing since 1919 by which it jointly

financed with the Board of Health, the Bureau of Public Health Nursing and Infant Hygiene. This bureau was reorganized April 1 as the Bureau of Maternity and Infancy, for its maintenance the State receiving \$27,259.66 annually from the United State Government in accordance with the Sheppard-Towner Act for the promotion of the welfare of mothers and infants. Dr. K. P. B. Bonner of Morehead City, was secured as the director of the reorganized Bureau, with Miss Rose M. Ehrenfeld as supervisor of nursing and Mrs. T. W. Bickett in charge of educational work.

The funds available during this period, and their distribution, were seven-twelfths of the amounts set out under the tabulation for 1921.

The appropriation for the State Laboratory of Hygiene for the nineteen months between December 1, 1920, and June 30, 1922, was \$87,083.33; in addition to this, the Laboratory collected in fees for special work, for antitoxin, and in water taxes, a total of \$30,872.51, making a total of \$117,955.84 available for the work of the Laboratory.

1923. The General Assembly of 1923 enacted some important and far-reaching legislation affecting public health work in North Carolina. The most important legislation enacted this year was the act providing for an independent board of directors for the State Sanatorium for Tuberculosis, removing the direction of that institution from the authority of the State Board of Health. Facilities were also provided at the State Sanatorium for the confinement, care, and treatment of tuberculosis convicts. Other legislation included the act to provide for the sanitary manufacture of bedding, the latter act to be enforced by the State Board of Health. The Bureau of Epidemiology was again combined with the Bureau of Vital Statistics.

On March 1 Dr. G. M. Cooper was made Assistant Secretary of the State Board of Health, and Dr. J. S. Mitchener was assigned to the Bureau of Medical Inspection of Schools, after the consolidation of the epidemiology work, which he had directed, with the Bureau of Vital Statistics. Dr. K. E. Miller of the United States Public Health Service was recalled for duty elsewhere.

In order to experiment with the plan of District Health Work, an effort was made to place responsibility for all State Board of Health activities under the direction of district directors attached to the staff of the State Board of Health. This effort was continued throughout the year, but proved to be ineffective and unsatisfactory.

During the year Dr. F. R. Harris resigned from membership on the State Board of Health to become health officer of Vance County. The Board elected Dr. D. A. Stanton, of High Point, to fill the unexpired term of Dr. Harris.

In order to further carry on the important work of malaria control in a number of the counties of the coastal plain area of

the State, which work was so effectively commenced in an educational capacity in 1920, the International Health Board was requested to participate in this work and to provide a director for that service. The International Health Board agreed, accepted the invitation, and assigned Dr. H. A. Taylor, of Alabama, to head this division. Pamlico County was selected as headquarters for Dr. Taylor. The cost of this work was borne by the State Board of Health and Pamlico County contributing 40 per cent each, and the International Health Board the remaining 20 per cent. The International Health Board, of course, paid the salary of Dr. Taylor.

In June Dr. J. S. Mitchener resigned as director of the Bureau of Medical Inspection of Schools and Dr. Roy C. Mitchell, who had been doing some special educational field work for the Board, temporarily succeeded Dr. Mitchener.

Early in 1923, Dr. W. S. Rankin, the State Health Officer, was invited by the Committee of Municipal Health Department Practice of the American Public Health Association to become field director for the committee in making a study of municipal health practices in the United States. This was for the purpose of working out a basis or set of principles through which city health departments could be given classification or grading, and also for the purpose of assisting such departments in their organization work. The request was brought before a special meeting of the executive committee of the Board, and it directed the Secretary to take advantage of the opportunity offered. The Board granted to the Secretary one year's leave of absence, but requested him at the same time to continue in touch as executive officer of the Board with the work of the Board.

On November 1 Dr. Rankin assumed his duties and established official headquarters in New York City for the work of the committee.

The general organization of the executive staff of the board was continued with the Assistant Secretary, Dr. G. M. Cooper, as official head of the staff. Local health work in the eastern half of the State was directed by Dr. H. A. Taylor, and that in the western part of the State by Dr. E. F. Long, who had been assistant to Dr. K. E. Miller as director of County Health Work. To assist Dr. Taylor in the east, Dr. George Collins, formerly health officer of Mecklenburg County, was employed, and to assist Dr. Long in the western half of the State, Dr. C. N. Sisk, formerly health officer of Forsyth County, was employed.

During the year a plan for the more adequate sanitary control of public milk supplies in the State was formulated. This work was undertaken under the direction of the Bureau of Engineering and Inspection, and Mr. Malcolm Lewis was employed to organize this work. Several changes in personnel took place this year. Dr. M. L. Iseley, who had been employed in county health department work, and Dr. Roy C. Mitchell resigned. Miss Rose M. Ehrenfeld also resigned.

1924. During this year Dr. Rankin continued his work with the American Public Health Association until November 1. During this period the work of the Board was directed by Dr. G. M. Cooper, serving as Acting Secretary. On November 1 Dr. Rankin returned, and during that month, under the direction of Dr. Maxey of the United States Public Health Service, a school for health officers was conducted under the auspices of the State Board of Health for one week in Raleigh. This meeting was well attended, and every modern method which might be utilized in the work of a modern public health department was discussed throughout the week.

Dr. M. L. Townsend was placed in charge of the Division of Health Education. Dr. K. P. B. Bonner resigned as director of the Bureau of Maternity and Infancy.

1925. Dr. Rankin resigned, effective June 1, to accept the position of director of the Hospital and Orphan Division of the Duke Foundation. At a meeting of the Board of Health on May 30, Dr. G. M. Cooper was unanimously made Acting Secretary for an indefinite period of time to succeed Dr. Rankin. During the year Dr. E. F. Long resigned as director of County Health Work, and Dr. C. N. Sisk, who had been assistant to Dr. Long, was placed in charge of County Health Work, without an assistant.
1926. On June 21 Dr. Charles O'H. Laughinghouse, a member of the Board, was elected permanent Secretary and State Health Officer to fill the unexpired term of Dr. Rankin. Dr. Laughinghouse accepted and took office October 1. Dr. G. M. Cooper, who had for sixteen months administered the work of the Board as Acting State Health Officer, continued with the service and was assigned to the Bureau of Health Education, succeeding Dr. M. L. Townsend, who resigned.

On August 6 Dr. Richard H. Lewis died. Dr. Lewis had served as a member of the Board since 1885, and from 1892 to 1909 he served as Secretary of the Board. Since 1909 he had been a member of the executive committee. Dr. Lewis held his membership on the Board by appointment from the Governor. To fill the term of Dr. Lewis, expiring in 1931, Governor McLean appointed Dr. John B. Wright of Raleigh. Among other reasons assigned for this appointment, the Governor stated that it had been the rule since the Board of Health was established to have at least one of the members of the Board a resident of Raleigh.

When Dr. Laughinghouse resigned, in order to accept the election to the position of State Health Officer by his fellow members on the Board, the remaining members of the Board elected Dr. W. S. Rankin, of Charlotte, former Secretary of the Board, to succeed Dr. Laughinghouse.

1927. There were no changes in personnel or in staff organizations during the year 1927. The most important event occurring this year was the death of Dr. J. Howell Way on September 22.

Dr. Way had been a member of the Board for many years and had been President of the Board for a long time. Governor McLean appointed Dr. C. C. Orr of Asheville to succeed Dr. Way. At the first meeting of the State Board of Health following the death of Dr. Way, Dr. A. J. Crowell of Charlotte was made President of the Board. In April of this year Dr. W. S. Rankin resigned as a member of the Board, and Dr. L. E. McDaniel of Jackson was elected by the other members of the Board to succeed Dr. Rankin.

1928. Dr. J. C. Johnson, who had been director of the Oral Hygiene Division, resigned as director of the oral hygiene work of the Board, effective December 31.

During this year a corps of nurses employed in the Maternity and Infancy Division of the Board, one-half of whose expenses were paid by the Federal Government from Sheppard-Towner funds, held midwife classes in about thirty counties of the State. The nurses gave special instruction to midwives in groups and the county authorities enacted midwife rules and regulations for the control of their practice.

The educational work of the Board was of a high order during this year. A thirty-two page Bulletin was issued monthly, and a moving picture machine with several films on modern health subjects was exhibited in many sections of the State.

1929. With aid secured from the International Health Board, the Life Extension Division was added to the activities of the Board this year. Dr. Frederick R. Taylor of High Point was made director of this division. Dr. Taylor carried this work before the medical profession in all sections of the State.

On January 1 Dr. Ernest A. Branch accepted the appointment as director of the Division of Oral Hygiene to succeed Dr. J. C. Johnson, resigned. Dr. Branch immediately set in motion reorganization plans for the oral hygiene work to include more lectures and more educational demonstration work. Dr. Branch made contacts with several of the colleges of the State and training schools for teachers.

Expenditures for the Board work this year reached the highest peak in the history of the Board, totalling about \$486,000. There were no significant changes, other than those mentioned above, in personnel during this year.

1930. This year marked many significant changes in the affairs of the State Board of Health. Early in the year Dr. C. N. Sisk, director of County Health Work, resigned. Dr. D. A. Dees succeeded Dr. Sisk as director of County Health Work. Soon after the resignation of Dr. Sisk, Dr. F. M. Register, director of the Bureau of Vital Statistics, resigned, and the work of that bureau was assigned to Dr. G. M. Cooper, in connection with his work as director of Health Education. On August 26 Dr. Chas. O'H. Laughinghouse, State Health Officer, died. Soon after his death, in a meeting of the Board, Dr. H. A. Taylor was made

Acting State Health Officer. On September 24, following the death of Dr. Laughinghouse, the Board elected Dr. W. P. Jacocks State Health officer to succeed Dr. Laughinghouse. On November 20 Dr. Cyrus Thompson, for many years a member of the Board, died. On December 16 the Board met and unanimously elected Dr. James M. Parrott of Kiuston as a member to succeed Dr. Thompson.

1931. At the beginning of this year Doctor Jacocks having declined to accept the position of State Health Officer, to which he had been elected by the Board on September 24, 1930, a bill was introduced in the Legislature abolishing the State Board of Health as then constituted. This bill was passed and became law during the session of 1931. With the enactment of the new law the terms of the members of the old Board were automatically terminated. Under this new law governing the State health work, legislative machinery providing for the establishment of a new organization to carry on the public health work of the State was enacted. The new law differs in many respects from the old law under which the Board had operated for so long. However, the most important provision of the old law was retained; that is, the non-political character of the Board and the retention of the permanency of the policies of the Board, although shortening the terms of office and making it impossible for the Board to become a self-perpetuating machine.

The important provisions in the new law under which the Board of Health work is now operating are as follows: The Governor still retains the power to appoint five of the nine members of the Board, the maximum term of office being four years instead of six, as under the old law, and no member to serve more than two terms, making the total tenure of office of any member to not exceed eight years. The Medical Society of the State of North Carolina still retains the power to elect four of the nine members of the Board, the same conditions as to term of office to obtain here as in those appointed by the Governor. It was recommended to the Governor, although not written into the law, and Governor Gardner accepted the suggestion, that he appoint one member from the State Dental Society and that he appoint a man recommended by that society. This is equivalent to allowing the State Dental Society to name one of the members, but still leaves the balance of power in the hands of the Governor. This seems to be a very satisfactory arrangement.

Another important change is that the Board still elects the State Health Officer, but it can only become effective upon the approval of the Governor. The term of the State Health Officer, along with members of the Board of Health, was restricted to four years, with the privilege of being re-elected.

Following the adjournment of the Legislature, the Governor appointed the following named members: Drs. J. T. Burrus,

High Point; H. Lee Large, Rocky Mount; J. N. Johnson, Goldsboro, the dental member; Professor H. G. Baity of the University of North Carolina; and Mr. J. A. Goode, a druggist of Asheville. The State Medical Society at its first meeting after the adjournment of the Legislature elected the following physicians to membership: Drs. James M. Parrott, Kinston; Carl V. Reynolds, Asheville; S. D. Craig, Winston-Salem; L. B. Evans, Windsor.

It will be noted that Dr. Parrott was the only member of the outgoing Board honored with election to membership on the new Board.

On May 28 the new Board met and organized. On that day it unanimously elected Dr. James M. Parrott State Health Officer. Dr. Parrott took the offer under consideration for a period of two weeks. On June 11 the Board met again, Dr. Parrott accepted the election and agreed to assume office on July 1. Dr. Parrott resigned his membership on the Board before being elected to the position of State Health Officer, and under the provisions of the new law the executive committee of the State Medical Society selected Dr. G. G. Dixon of Ayden to serve in Dr. Parrott's place until the 1932 meeting of the State Medical Society. It will be noted that this is an important variation from the provisions of the old law. Under the old law the other members of the Board held the authority to name a successor, whether a member resigned or died. Under the new law the Governor names his vacancies in his list and the executive committee of the State Medical Society is permitted to name a successor to serve only until the first meeting of the State Medical Society follows.

In the meeting of June 11 the new Board found it necessary to eliminate some members of the staff and to make some consolidations, on account of reduced appropriations for the Board work. The services of Dr. D. A. Dees and Mr. R. B. Wilson were dispensed with, effective July 1. The Board reorganized the staff and made many consolidations. The new reorganization follows.

The Board reorganized the work into divisions, making many consolidations and increasing the duties of the directors of each division. Following are the divisions organized: Administrative Officer, Dr. James M. Parrott; Director Division of Laboratories, Dr. C. A. Shore; Director Division of Preventive Medicine, Dr. G. M. Cooper; Director Division of Oral Hygiene, Dr. Ernest A. Branch. The division of County Health Work and Epidemiology was temporarily assigned to Dr. H. A. Taylor, but on August 3 Dr. Taylor resigned and Dr. John H. Hamilton, health officer of New Hanover County, was appointed director of this division. The position of director of Division of Sanitary Engineering was filled on July 14 by electing Mr. Warren H. Booker, who had formerly headed that work, to succeed Mr. H. E. Miller.

The election of Dr. Parrott was received throughout medical and public health circles of the entire State with enthusiasm. Under his able direction the work of the Board during the last half of this year moved with a precision which was gratifying to all the friends of public health work in the State.

A detailed account of the organization work of each one of the divisions covering the activities of this biennium will be found in the pages to follow.

REPORT OF THE SECRETARY-TREASURER AND STATE HEALTH OFFICER

Official Record of Board Meetings

The present Secretary-Treasurer of the Board and State Health Officer assumed his duties on the first of July, 1931. Of necessity, his report must be largely a matter of quotations from the minutes of the Board for the fiscal year (the first year of this biennium) beginning July 1, 1930.

On August 1, 1930, the Board met in Raleigh with the following attendance: Dr. Thomas E. Anderson, Dr. Cyrus Thompson, Dr. D. A. Stanton, Dr. C. C. Orr, Dr. John B. Wright, Dr. L. E. McDaniel, Mr. James P. Stowe, and the President, Dr. A. J. Crowell. Among other business transacted, the following resolution was unanimously passed:

"That the Board reiterates the policy which has been in effect for the past twenty-one years, namely, that the Secretary shall be solely responsible for the employment and dismissal of personnel required to carry on the necessary work of the Board, with salaries to be paid in accordance with standards approved by the State Salary and Wage Commission."

And the following motion was carried unanimously:

"That the Secretary (Dr. Laughinghouse) take a vacation of not less than six weeks, or longer if it should be deemed necessary."

On August 28 a special meeting of the Board was called and held at 7:45 P. M. at the Sir Walter Hotel, Raleigh, N. C., with the following members present and Dr. A. J. Crowell presiding:

Dr. Thomas E. Anderson, Dr. Cyrus Thompson, Dr. John B. Wright, Dr. C. C. Orr, Dr. D. A. Stanton, Dr. L. E. McDaniel, and Dr. E. J. Tucker. President Crowell explained that this meeting was called to elect an Acting Secretary to serve until such time as the Board might be prepared to fill the unexpired term of Dr. Charles O'H. Laughinghouse, who died on August 26th—two days before.

Dr. H. A. Taylor was elected by a majority vote as Acting Secretary.

Doctors Thompson, Orr and Crowell were appointed a committee to draft and present suitable resolutions of respect for Dr. Laughinghouse.

The Board met in special session in the offices in Raleigh on September 24, 1930, with more than a majority of the members present. The following resolution was adopted:

"The Board of Health records in its minutes its profound sense of personal sorrow and public loss at the death of its late Secretary, Dr. Charles O'Hagan Laughinghouse, who, after a brief acute illness, following several weeks of declining health died on the afternoon of August 26, 1930.

"Dr. Laughinghouse stood easily in the forefront of the profession of medicine and in the excellence of man, and in the midst of remarkable public service he fell unexpectedly, a Prince and a great man.

"He was great in head; great in heart; great in integrity of character; great in industry and in loyalty to his friends and to the public.

"He knew medicine, but he knew more than that: he knew men and books and the wisdom of the sages. He was a splendid example of the cultured medical man.

"He lived his life so serviceably, uprightly and honorably that while his going leaves a deep sense of loss, it gives no cause for tears or the beating of the breast. He was all that North Carolina expects a citizen to be. In full man size, he was the spirit of North Carolina incarnate."

At this meeting of the Board it was advised by letter from Mrs. Laughinghouse that Dr. Laughinghouse had left his medical library to the State Department of Health and the Board unanimously and with gratitude and expressions of deep appreciation accepted the gift and expressed its appreciation to Mrs. Laughinghouse.

At a called meeting of the Board at which more than a majority of the members were present, which was held in the offices in Raleigh on December 16, 1930, the Board was advised of the death of Dr. Cyrus Thompson, long-time member of the Board. Dr. Thompson died on the 20th of November, 1930. The Board passed suitable resolutions expressing its deep regret because of the death of Dr. Thompson. These resolutions were made a part of the official records of the Board. Dr. Thompson richly deserved the fine expressions contained in the splendid resolutions. He was an outstanding member of the State Board of Health and one of North Carolina's most beloved and valued citizens.

At this meeting Dr. James M. Parrott of Kinston was unanimously elected to fill the unexpired term of the late Dr. Cyrus Thompson, and indicated his acceptance to a committee appointed to confer with him.

On January 16, 1931, the Board met in special session in the offices in Raleigh, more than a majority of the members being present. Routine business was transacted and a motion was passed directing that the Executive Committee of the Board meet within a week of the second Wednesday of each third month.

On March 10, 1931, the Executive Committee met and transacted such business as was brought before it. The attention of the Executive Committee was called to certain legislation which was pending in the General Assembly, and especially a bill for the reorganization of the State Board of Health, and it was unanimously decided that the Executive Committee should make no effort to obstruct the passage of such a bill.

On April 21, 1931, the Board met in regular session at Durham, N. C. Matters of usual interest were discussed and disposed of. The Roanoke Rapids Sanitary District was formally created, new rules and regulations governing the control of barber shops, which was transferred by act of the Legislature from the State Board of Health to the Barbers' Examining Board, were provided. Amendments were adopted covering specifications for approved earth pit privies. A resolution was unanimously adopted re: "Protection of Surface-Filtered Water Supplies."

The General Assembly of 1931 passed an act which provided that the State Board of Health should consist of nine members, four of which members shall be elected by the State Medical Society of the State of North Carolina, and five of which members shall be appointed by the governor, and also provided that the Secretary-Treasurer and State Health Officer should be elected by the Board, subject to the approval of the governor, for a period of four years.

During its session in April, 1931, the State Medical Society elected Dr. James M. Parrott, of Kinston; Dr. Carl V. Reynolds, of Asheville, for four years; Dr. L. B. Evans of Windsor, and Dr. S. D. Craig of Winston-Salem, for two years; and shortly thereafter Governor Gardner announced the appointment of Dr. John T. Burrus of High Point, for two

years; Dr. J. N. Johnson, D.D.S., of Goldsboro, for two years; Mr. J. A. Goode, Ph.G., of Asheville for two years; Dr. H. Lee Large, Rocky Mount, for four years; Dr. H. G. Baity, Sc.D., C.E., Chapel Hill, for four years.

On May 28, 1931, at the request of Governor Gardner, the members of the new State Board of Health met in the Governor's office and after a short address by the governor, adjourned to the State Department of Health building to hold its first official session.

Dr. John T. Burrus, of High Point, was elected President, Dr. Carl V. Reynolds, of Asheville, was elected Vice-President, and Doctors Large, Johnson and Craig as member of the Executive Committee. Reorganization of the Board and a revisal of policies was seriously considered. A Committee on Reorganization composed of Doctors Parrott, Johnson, Baity and Large was appointed, and a committee to consider and nominate a Secretary and State Health Officer composed of Doctors Evans, Craig, Burrus, Large and Johnson was appointed.

The Board at its second session on that day, continued the Committee on Reorganization and received the report of the committee to nominate the Secretary. The committee having nominated Dr. James M. Parrott of Kinston, he was unanimously elected subject to his acceptance not later than June 11, 1931.

On June 11, 1931, the Board met in its office in Raleigh pursuant to its adjournment on May 28th.

Dr. Burrus was officially added to the Executive Committee.

The following were elected members of the State Embalmers Board: T. W. Somerset, 5 years; W. N. Vogler, four years; Ben E. Douglas, three years; C. E. Stanley, two years, and R. L. Lewis, one year.

The Committee on Reorganization, which was appointed at the May 28th meeting reported the following divisions were created:

- Division of Administration
- Division of Preventive Medicine
- Division of Sanitary Engineering
- Division of Oral Hygiene
- Division of Laboratories.

A series of resolutions were presented and unanimously adopted giving definite authority in certain matters to the Secretary, to the Executive Committee, and making certain declaration of the purposes of the Board, and giving instructions to the Executive Committee, and continuing in effect and purpose all previous rules, regulations and definition of duties, then in force.

The Board also prescribed the duties of the division directors and the activities of the divisions.

The Board provided that an assistant to the State Health Officer be elected and that his special duties should be to direct epidemiology, county health work, and secretarial. Dr. H. A. Taylor was elected assistant to the State Health Officer. Dr. C. A. Shore was elected Director of Laboratories; Dr. G. M. Cooper, Director of the Division of Preventive Medicine; Dr. Ernest A. Branch, Director, Division of Oral Hygiene; Mr. H. E. Miller was requested to continue as directing head of the Division of Sanitary Engineering until July 14th, at which time the Board expressed its purpose to meet for the election of a Director of the Division of Sanitary Engineering.

Dr. James M. Parrott presented his official resignation as a member of the Board of Health and the same was accepted.

Dr. James M. Parrott then advised the Board that he had decided to accept the position as State Health Officer and Secretary-Treasurer of the Board, on condition that his term of service should begin on July 1, 1931.

On July 1, promptly on the opening of the offices, Dr. James M. Parrott presented himself in the rooms of the Board and was duly and officially sworn in as Secretary-Treasurer and State Health Officer by Miss Mae Reynolds, Notary Public, and budget officer of the Board.

On July 14, the Board met in the offices in Raleigh and officially received and inducted into office Dr. G. G. Dixon of Ayden, who had been elected according to law by the Executive Committee of the State Medical Society to fill the position as a member of the Board which was made vacant by the resignation of Dr. Parrott.

A number of routine matters were discussed and acted upon. Mr. Warren H. Booker was elected Director of the Division of Sanitary Engineering.

The Board decided that it should meet quarterly and that the Executive Committee should meet subject to the call of the Secretary.

On July 31, 1931, the Executive Committee was called into special session by the secretary and considered certain matters and after disposition of the same, adjourned.

On January 27, 1932, the Board met in regular session in its offices in Health Building in Raleigh, N. C. Certain Board policies were approved—see report of the Secretary Parrott to the Conjoint Session, which report is appended hereto.

Secretary Parrott advised the Board of the resignation of Dr. H. A. Taylor and that the Division of County Health Work and Epidemiology had been created and Dr. John H. Hamilton, of Wilmington, appointed as Director, and that Dr. Hamilton had begun his service September 1, 1931. The Board approved the abolishment of the Assistant to the Secretary, and the creation of a Division of County Health Work and Epidemiology and the appointment of Dr. Hamilton as Director.

At this meeting the Secretary advised the Board that Dr. R. T. Stimson, of East Bend, Yadkin County, had been appointed as an assistant in the service of Dr. Hamilton, and that the Bureau of Vital Statistics had been transferred to the Department of Epidemiology and County Health Work and that Dr. Stimson is charged with the specific duty of handling the Bureau of Vital Statistics. The Board approved this action.

The Secretary advised the Board that he had very fortunately secured the temporary assignment of Dr. M. V. Ziegler, of the United States Public Health Service, to the Board and that Dr. Ziegler had begun his service in October, 1931.

The Board appointed a committee composed of Doctors Hamilton, Ziegler and Parrott to make such changes in the rules and regulations governing communicable diseases as it might deem best and submit the same at the meeting of the Board in April. Certain rules and regulations regarding school privies were adopted.

The Board took cognizance of the importance of teaching health and directed that the whole time county health officers be urged to devote more time to this important matter.

At this session the Board took cognizance of the generous spirit of the late Dr. Charles O'Hagan Laughinghouse in presenting his library to the Department of Health and a bronze tablet commemorating this bequest was officially received with appropriate exercises during which the invocation was delivered by the Reverend F. S. Love and addresses were made by Dr. Carl V. Reynolds, presiding; Dr. A. J. Crowell, Dr. John T. Burrus, Dr. M. L. Stephens, Dr. George M. Cooper, and the benediction was pronounced by Dr. Albert Anderson.

In accordance with the Board's expressed wishes, the program, together with the addresses was made a part of the minutes and filed with the archives of the Board.

The tablet was donated by friends of Dr. Laughinghouse.

On April 19, 1932, the Board met in regular session at Winston-Salem. It transacted routine business. Mr. William D. Riley, who had been in the State for a number of weeks from the United States Public Health Service, making a syphilitic survey, was present and submitted some very interesting remarks. The matter was referred to the Secretary and staff.

The Secretary advised that Dr. D. F. Milam, a skilled and highly trained health officer, had been loaned the Department by the International Health Board for one year to assist Dr. Hamilton, particularly in the Department of Epidemiology. Dr. Milam would report for duty the first of June, 1932.

The Secretary reported that Dr. J. C. Knox had been secured for work in the service of Dr. Hamilton as an understudy of Dr. Milam and would report for duty on June 1, 1932.

The Board of Health and the committee from the North Carolina Public Health Association approved the statewide immunization campaigns and immunization policies of the Board. Certain amendments to rules and regulations of hotels, cafes, and summer camps were passed.

Amendments proposed by the staff to the county-aid contracts were approved.

The committee which was appointed at the January meeting to make needed changes in the rules and regulations governing communicable diseases submitted its report. The Board members secured, each for himself, a copy and shortly thereafter unanimously advised approval by letter to the Secretary.

On April 20, 1932, the Board met again in conjoint session with the State Medical Society, at which time the Secretary, Dr. Parrott, presented his report.

The Secretary called the Executive Committee in special session to be held on May 27th at the Caledonia Prison Farms for the purpose of inspecting the sanitary condition of the farms and of the camps. After thorough and complete investigation of camps No. 1-2, and No. 3, the committee made definite reports and recommendations and directed the Secretary to furnish copy of the same to the Governor and the Superintendent of the State Prison.

THE NORTH CAROLINA STATE LABORATORY OF HYGIENE

In directing attention to the following report for the past biennium, made by the director of the State Laboratory of Hygiene, which is one of the divisions of the North Carolina State Board of Health, it seems impossible to contemplate the expansion of this most important work as set forth in this report, when it is realized that the laboratory was not established until 1905. The General Assembly that year voted a total appropriation of \$600 for the purpose of establishing a laboratory, to be conducted in connection with the other work of the State Board of Health. Naturally this was an insignificant sum, but it served as a beginning. When the laboratory was first established, in 1905, they were forced to call on the Laboratory of the State Department of Agriculture to assist in some of the work, which was even then being demanded. It is hoped that the people of the State will realize, as they may read this report, the extent to which they have come to depend upon the work of this laboratory.

The Plant of the State Laboratory of Hygiene is situated on a plat of five acres in the City of Raleigh.

The buildings consist of one main two-story structure of brick, containing 14,610 square feet of space.

One horse stable with space for twenty-four horses.

One calf-stable for use in the preparation of smallpox vaccine, and several smaller out-buildings.

The laboratory force consists of twenty-four regular employees and one temporary employee at the present time, and they may be classified as follows:

Director	1	
Diagnostic Division—		
Bacteriology	3	
Water, bacterial and chemical	2	
Serology	4	
Technical assistant	1	10
Vaccines and Serums—		
Bacteriologist	1	
Serology	3	
Technical Assistant	1	
Stableman	1	6
Office—		
Shipping and Property Clerk	1	
Bookkeeper	1	
Stenographer	1	
Filing Clerk	1	4
Chauffeur and Mail Clerk	1	
Janitor	1	
Char woman and laundress	1	
Temporary technical assistant	1	
Total.....		25

REPORT OF EXAMINATIONS MADE

	Total	Positive	Negative
Diphtheria:			
Examinations, bacteriological.....	11,148	1,538	9,610
Animal inoculations.....	4		
Typhoid:			
Agglutination tests.....	1,927	57	1,870
Blood cultures.....	2,703	414	2,289
Macro typhoid widal.....	2,606	306	2,300
Feces and urine cultures.....	2,264	57	2,207
Veneral Diseases:			
Gonococcus.....	3,925	1,207	2,718
Wassermann.....	145,857		
Blood—			
Negative..... 109,690			
Four plus..... 18,347			
Three plus..... 5,338			
Two plus..... 4,570			
One plus..... 4,799			
Unsatisfactory..... 407			
Haemolyzed..... 1,364			
Spinal Fluid—			
Negative..... 1,122			
Four plus..... 57			
Three plus..... 24			
Two plus..... 23			
One plus..... 32			
Unsatisfactory..... 84			
Tuberculosis:			
Sputum, bacteriological.....	5,589	853	4,736
Animal inoculations.....	45		
Rabies:			
Microscopic examinations of brains.....	1,758	570	1,188
Animal inoculations.....	691		
Malaria:			
Blood smears.....	1,748	75	1,673
Urinalyses.....	202		
Water Analyses:			
Bacterial and chemical.....	12,524		
Typhus fever, agglutination.....	1,402	26	1,376
Undulant fever, agglutination.....	2,227	49	2,178
Vincent's angina.....	2,202	947	1,255
Tissue examinations.....	348		
Miscellaneous.....	645		
Spinal fluid.....	228		
Feces, Intestinal Parasites:			
Number of examinations.....	6,144	830	5,314
Total.....	206,187		

REPORT OF BIOLOGICALS DISTRIBUTED

THE FOLLOWING ARE MANUFACTURED IN STATE LABORATORY OF HYGIENE:

Diphtheria Antitoxin (units).....	191,250,000
Schick Tests for Diphtheria (tests).....	152,200
Schick Control for Diphtheria (tests).....	52,150
Smallpox Vaccine (vaccinations).....	477,515
Typhoid Vaccine (doses).....	1,877,821
Rabies Treatments (complete—21 doses each).....	1,655
Tetanus Antitoxin (units).....	36,850,000
Pertussis Vaccine (doses).....	101,995
Autogenous Vaccine.....	159
Bacterial Cultures.....	78

THE FOLLOWING ARE BOUGHT AND DISTRIBUTED AT COST:

Diphtheria Toxoid (doses).....	13,439
Diphtheria Toxoid (doses) U. S. P. H. S. (contributed).....	19,980
Diphtheria Toxin Antitoxin (doses).....	359,941
Diphtheria Toxin Antitoxin (doses) U. S. P. H. S. (contributed).....	18,640
Neoparsphenamine and Sulpharsphenamine (doses).....	56,451
Scarlet Fever Antitoxin (syringes).....	139
Dick Test for Scarlet Fever.....	1,290
Blanching Test for Scarlet Fever.....	40
Erysipelas Antitoxin (syringes).....	26
Antivenene (syringes).....	20
Meningitis Antitoxin (syringes).....	65
Bacteriophage (vials).....	348

RECEIPTS

BIOLOGICALS MANUFACTURED IN STATE LABORATORY OF HYGIENE:

Diphtheria Antitoxin.....	\$ 7,628.60
Tetanus Antitoxin.....	13,833.04
Rabies Treatments.....	6,745.72
Autogenous Vaccine.....	531.85
	<hr/> \$ 28,739.21

ARTICLES BOUGHT AND DISTRIBUTED AT COST:

Diphtheria Toxoid.....	\$ 816.52
Diphtheria Toxin Antitoxin.....	7,160.59
Neoparsphenamine and Sulpharsphenamine.....	10,988.76
Distilled Water.....	1,507.60
Scarlet Fever Antitoxin.....	468.12
Dick Test.....	28.12
Blanching Test.....	4.62
Erysipelas Antitoxin.....	141.26
Antivenene.....	97.98
Meningitis Antitoxin.....	175.92
Bacteriophage.....	134.64
	<hr/> 21,524.13
Total.....	\$ 50,263.34
Refund.....	528.00
	<hr/>
Net total.....	\$ 49,735.34
Water Tax.....	20,653.03
Special Fees.....	1,129.00
Miscellaneous.....	331.50
Venereal Disease Control Clinic.....	1,475.35
	<hr/> \$ 73,321.22

FINANCIAL STATEMENT

Total Expenditures.....	\$ 164,216.04
Total Receipts.....	73,324.22
	<hr/>
Appropriation.....	\$ 90,891.82

DIVISION OF PREVENTIVE MEDICINE

The personnel of this division is composed of one medical director, one stenographer, one special clerk in the Division of Maternity and Infancy, and two expert mailing clerks, who send out all the literature of the Board and who handle the mimeograph and multigraph machines; and six trained nurses, who do field work all the time in the Divisions of School Health Supervision and Midwife Control Work. The work of this division covers the following activities: a Department of Medical School Inspection, or School Health Supervision, a Department of maternity and Infancy, a Department of Health Education, and the medical correspondence, or Personal Health Service, of the Board. The director has administrative responsibility for all these departments.

School Health Service

This service was organized in 1918 by this bureau and has been constantly functioning ever since. During the two-year period ending June 30, 1932, the six nurses engaged in this work inspected the school children in 49 counties, covering every section in North Carolina. This work has been confined to the smaller and more remote counties for the most part which have no organized health departments. Some of the counties they have worked in are large and wealthy counties but the authorities of which have never undertaken the organization of any form of whole time health work. These nurses visit every school in such counties for both races. They inspect the children, record their findings on suitable cards, which are made permanent records in the offices of county superintendents of schools. Suggestions are sent to the parents of such children as they find, who need operative or medical or dental treatment for the removal of common physical defects. They have lectured to the children, grade by grade, or in groups, and have presented their findings to assembled teacher groups in all the counties in which they have worked. They publish their findings in the local newspapers, and they have cooperated with the local physicians and dentists as well as the teachers and parents in undertaking to get follow-up medical or surgical treatment done when necessary. They have imparted instruction as to ordinary sanitary measures, and have given out information about the prevention of the spread of communicable diseases. Their work has been pronounced as invaluable by competent, disinterested authorities. In this work during the period they have inspected a total of 136,680 children. They have reported medical, surgical, or dental treatment for 4,594 children during the period.

Maternity and Infant Hygiene Service

In this department we send out a series of nine prenatal letters to expectant mothers in response to requests from the mothers themselves, their families, or their physicians, or the midwives. These letters contain confidential information direct from this department to the mother. A vast amount of helpful advice is contained in this series of letters. In

addition to the letters, we send to each one of these inquiring expectant mothers a specially prepared pamphlet known as "Prenatal Care." This is a pamphlet prepared by the Federal Government at Washington and contains authentic and scientific information written in language that the most ignorant mother can understand. In addition to the foregoing, the director of the bureau writes numerous letters answering questions of a general character sent in by expectant mothers.

This service is in no way devised to take the place of physicians, but is calculated to assist the physicians in service to the patient where they have a physician, but its most valuable field is among the people who do not have the services of a physician at childbirth. Nearly one-third of the mothers giving birth to babies in the State during this period were attended by midwives, and never made contact with a physician at all. Therefore it will be seen that this service is of inestimable value to a large group of women who avail themselves of its assistance.

During the period a total of 152,618 prenatal letters and books were sent to inquiring mothers on request. In addition to the foregoing, we sent out specially prepared time cards and diet lists as well as two excellent publications, one known as "Our Babies" and the other as "Infant Care." This material is sent only on request from the physician, the midwife, or the mother. In this literature is assembled a large amount of valuable information which is of great aid every day to the mothers as to feeding and care of infants. During the period a total of 346,873 pieces of this literature have been sent out.

Through this department an effort is made to make contacts with all of the midwives working in the State, this work being taken up county by county in the State outside of whole time health officer counties, the midwives being assembled in small groups in their communities, in which they receive definite instructions from the nurses with reference to safety measures for the mothers they attend, and with reference to minimum equipment, reporting of the births, the use of prophylactic treatment for babies' eyes, as the law requires, and everything pertaining to the general welfare of the mothers coming under their care. A large number of dirty and incompetent midwives have been put out of practice, and the general character of many of those now engaged in such work is far above their status of a few years ago.

Health Education

In this important department of the work the most effective service is offered through the columns of the Health Bulletin, a monthly publication started more than forty years ago and which is sent on request to citizens of the State. This Bulletin is a sixteen-page monthly. The director of the division is editor of this publication, and a special effort is made to teach the simple elemental requirements of hygiene and sanitation in an understandable manner to all sections and groups of the population. During the period thirty-two thousand copies each month have been prepared and mailed out. It has been said by competent authorities that this Bulletin is one of the best of its kind in the United States. Recently the head of the Health Education Service of one of the greatest life insurance

companies in the world in a public statement declared that the health education work of the North Carolina State Board of Health was the best and most effective in the country.

In addition to the thirty-two thousand copies each month of the Health Bulletin, during the period a total of 1,807,116 copies of special publications such as pamphlets containing all available information about communicable diseases as diphtheria, has been sent out on request to citizens of the State. There is available in this division a total of thirty-nine special bulletins and pamphlets on as many different diseases and conditions. New books and pamphlets and bulletins are prepared from time to time as the demands of modern public health service require. In addition to the foregoing a total of many thousands of special mimeograph and multigraph communications offering specific information is sent out monthly through the mailing department of this division. During the two-year period a grand total of 2,575,116 pieces of literature has been mailed out through this division.

Personal Health Service

In a state of more than three million people it is natural to suppose that a large and increasing number of them will be constantly writing to the State Board of Health for definite information on a variety of subjects affecting the health of the people. An inconceivable number of questions on every known subject in the field of medicine and public health are received during the course of every year. Naturally a large proportion of these questions cannot be answered, but many of them can be answered with benefit to the inquirer. The keynote to this service in the replies sent out is information on how to protect the individual families from the ravages of preventable diseases. A large amount of personal advice is offered in such matters as nutrition and immunization against communicable diseases. An average of about fifteen letters a day are sent out every working day in the year.

DIVISION OF SANITARY ENGINEERING

The personnel of this division is composed at present of a chief engineer, who is full-time director, three assistant engineers, one junior sanitary engineer, two stenographers, five district sanitary inspectors, and two sanitary inspectors. This is less than half the number of employees in this division two years ago. While this is a reduction of about 50 per cent in the personnel, the need for work and the demand of the public for service have not been reduced in any way. Operating under such conditions has meant adjustments in many ways. It has meant, among other things, that work has doubled on employees in certain departments in which the service is urgent. The work of this division embraces non-medical activities of the Board, including, among other things, water supply and sewage disposal control, milk sanitation, shellfish sanitation, school sanitation, hotel and cafe sanitation, summer camp and roadside sanitation, as well as enforcement of the bedding law and privy law.

One of the policies of this division has been to improve the quality of the personnel wherever changes had to be made. A special effort has been made to better train, inform, and equip the present personnel. One example of such an effort was the Sanitary Inspectors Conference held in the fall of 1931 and which is to be an annual occurrence. In this conference not only the division of inspectors were given several days of intensive training, but all other inspectors and health officers in the State were invited to attend. Many of them availed themselves of the opportunity.

One of the notable contributions to public health service in this biennium by this division was the inauguration and carrying through to a successful conclusion of the state-wide Milk-for-Health campaign. The Milk-for-Health campaign was inaugurated for a two-fold purpose. One was to increase the milk consumption, and the other was to make for greater safety in the production of milk. In other words, milk sanitation and milk consumption were the objectives aimed at. It was hoped that this campaign would at least check the declining average per capita consumption, and perhaps increase it, in the State. It is a fact that the decreasing per capita milk consumption was not only checked, but a substantial increase in the consumption during the latter part of the biennium was made. These facts are indicated by reports from many quarters. This work is not only a forward step in nutrition and better health, but the dairy industries of the State were benefited to a marked extent. We find that the dairymen throughout the State are cooperating in every way with the program of this division.

During the last year of this biennium it was found necessary to redesign all the sanitary structures recommended by the State Board of Health. Special efforts were made to improve, simplify, and reduce the cost of privies, residential sewage disposal plants, as well as school and institutional sewage treatment plants and private water supplies.

Formerly a very troublesome and annoying problem has been that of the illicit sale of shellfish throughout the State, particularly to hotels and cafes. A plan of instructing the operators of these places and cooperating with them by assisting in advertising certified oysters, if these proprietors

would agree to purchase no illicit or bootleg oysters, would reduce the quantity of illicit oysters sold in the State promiscuously 90 per cent, and it is believed by next year this annoying problem may be solved completely.

During the Milk-for-Health campaign over a third of a million pieces of literature was distributed to interested citizens.

On account of the reduced personnel the matter of roadside sanitation has not been pushed as vigorously as it had been before, although some important work has been done along this line. Similarly not so much work has been done in the enforcement of the State bedding law, although considerable efforts have been made along this line. The two foregoing problems have not loomed so much in importance as the State's water supply and milk supply.

The department has had uniform success in dealing with voluntary summer camp sanitation. In the case of summer camps the department has had to deal with such people as college professors and the highest type of citizenship in control of these summer camps. Such people properly evaluate sanitation, and as they have a direct responsibility to the parents who send their children to these camps, they have fully appreciated the necessity for sanitation. An increased number of summer camps operating in this State have cooperated with the department.

Special efforts have been made to improve the general sanitation of the schools, with gratifying results in many instances. Special efforts have been made during inspections to impress upon the janitors, principals, and superintendents, or other responsible persons the defects found. In this connection a much needed school inspection leaflet has been published and has been very effective in the instances where it has been used. Plans and specifications were prepared during the period for improved school sewage treatment plants. On the whole the work of school sanitation has progressed satisfactorily during the period.

The required statutory routine inspections were made of jails, prisons, convict camps, hotels, and cafes. At the close of the period there were seventy-one municipalities in the State that have adopted the United States Public Health Service milk ordinance. In general, this ordinance was not being enforced so well as it should be, but improvements are being made, and it is hoped that much greater progress may be reported during the next biennium.

The engineering work of this department has been of a routine nature. With the coming of the local government commission and the unsatisfactory condition of the financial world, there has been comparatively little waterworks or sewer construction proposed in the State. A notable exception to this has been the installation of a water and sewer system at Valdese, North Carolina. This work was provided for following an election by the people for the issuance of bonds. The town of Canton approved of a \$75,000 bond issue for new waterworks, and improvements in the sanitary district at Roanoke Rapids were also affected. Numerous small sewage treatment plants are being installed by school institutions, convict camps, and communities. One of the important responsibilities of the engineering division has been to keep plant operation and equipment intact through routine inspections, and also to insure a continuance

of the existing plant personnel, even though it has been necessary to add other duties or to reduce salary, and in some instances both. There are between 275 and 300 small industrial waterworks plants in the State. Thus far it has been impossible to offer assistance in any of these plants.

The responsibilities of this department are tremendous. Not a week passes that some major project is not up for solution. Many demands were constantly made for the services of engineers in dealing with sewage and water supply matters in many sections of the State.

Distinct advances have been made in privy sanitation, and the work of the department has advanced even better than would ordinarily be expected under the circumstances.

Among the changes in personnel made in this biennium besides change of directors, as noted elsewhere in the Board of Health report, Mr. Thomas W. Riddick of Gatesville, was employed to replace Mr. G. L. Arthur, Jr., formerly with the Department of Conservation and Development, who was doing shellfish sanitation work on a part-time basis under the direction of this Board. Mr. Arthur, by reason of other interests and duties, found he could not accept a whole-time position with this Board; so Mr. Riddick has been employed for his whole time. The services of an engineer from the Public Health Service was also secured in reorganizing the shellfish sanitation work. The possibilities of developing an active shellfish industry in North Carolina are very great, and it is the desire of this department to do its part to encourage this industry.

During the last year of this biennium the United States Public Health Service assisted materially in the sanitary work of a number of counties in the drought area through a fund allotted by the Federal Government for sanitary work in this section. By reason of the Federal Government assistance a number of counties were able to have sanitary inspectors for their whole time that had not heretofore received such service.

The following is a report of some of the routine field activities of the Division of Sanitary Engineering and Inspection for the period:

Municipal water plant inspections	458
Municipal sewerage system inspections	182
Privy inspections	88,372
Privies approved	31,091
New built privies	7,482
Septic tanks inspected	1,927
Septic tanks approved	990
Hotels rated	732
Cafes rated	3,487
Dairy inspections	3,628
Milk plants inspected	194
Retail bedding store inspections	1,865
Pieces of bedding condemned	2,602
School inspections	4,303
Private water supply inspections	17,294
Private water supply approvals	6,389
Private water supplies condemned	6,421
Filling stations inspected	5,818

Lunch counters and "hot dog" stand inspections	183
Jail inspections	274
County prison camp inspections	351
Highway prison camp inspections	50
Vital statistics registrars visited	290
Undertakers visited	80
Midwives visited	86
Doctors visited regarding vital statistics reports	143
Unreported births	102
Unreported deaths	63
Summer camp inspections	150
Typhoid vaccinations assisted doctors and nurses	21,688
Typhoid fever cases investigated	105

As a result of present economic conditions, the lives and health of thousands of North Carolinians are not only being threatened, but actually sacrificed for lack of adequate sanitation. The added cost of this unnecessary sickness, and deaths in turn, makes our present economic burden heavier. It is an evil cycle which has been inevitable, with our diminishing funds and personnel, and increasing demands for service and difficulty in securing State sanitation.

This cycle of insanitation, which leads to sickness, deaths, economic loss, distress and more insanitation should and could be reversed. With improved sanitation there follows decreased sickness and deaths, and less loss of time and money, and the cycle is reversed for better health, more economy, greater efficiency, and the better welfare of our people in every way.

In a very short report of this nature, time and space forbid the going into details regarding the economic savings to North Carolina through sanitation, because it affects the entire public health problem. For that reason but one disease will be considered briefly, namely, typhoid fever. Typhoid fever is a disease of insanitation. The savings in life and health of sanitating against this disease alone are enormous. Considering the monetary value of a human life at \$5,000 and the loss in time and money for a case of typhoid at \$3,000, the saving to North Carolina in reduction of typhoid alone during the past 18 years has been over \$84,000,000. The saving from this one disease alone has been over 13 times the total cost of not only sanitation, but all departments of State health work in North Carolina.

DIVISION OF COUNTY HEALTH WORK, EPIDEMIOLOGY AND VITAL STATISTICS

The Division of County Health Work, Epidemiology, and Vital Statistics has a staff of one medical director, two medical assistants, four stenographers, and sixteen other clerical assistants.

VITAL STATISTICS

Although the Bureau of Vital Statistics has had three Directors during this biennium, it has endeavored to perform the duties assigned to it by the General Assembly of 1913.

Birth and death certificates have been filed, indexed, tabulated and analyzed. The services rendered by the Bureau have been increased. Attempts have been made to improve the completeness and acceptability of the records.

The fundamental features of our registration system are: **First**, there is a registration district for each township, town, and city. One or more of these units may be combined into one district when deemed advisable. **Second**, for each registration district, a local registrar is appointed. It is the duty of this local registrar to secure birth and death certificates for each person who is born or dies within his registration district, and to forward these certificates to the State Board of Health on the fifth of each month. **Third**, the doctor or midwife who attends a birth must file a birth certificate with the local registrar within five days after the birth occurs. **Fourth**, the undertaker, or person acting as undertaker, is responsible for filing the death certificate. He must secure the personal information from the relatives or friends of the deceased, have the medical portion, showing cause of death, filled out by the doctor last in attendance, then take the certificate to the local registrar and get a burial permit before burial takes place. In cases where no regular undertaker is employed, the member of the family or friend who purchases the casket is responsible for filing the death certificate and securing the burial permit.

In counties having a full-time health officer, the local registrar forwards a report to him each month of the births and deaths that have occurred in the registrar's district.

After the certificates reach the State Bureau of Vital Statistics, they are checked for completeness. Letters are written in an effort to secure any missing information. The certificates are then numbered and permanently bound in volumes of 500 certificates. An index card is made out and filed for each certificate to enable prompt location if it becomes necessary to refer to the record.

The parents of children are notified when the birth certificate is received by the Bureau. These notices should be received within about three months after the birth of the child occurs. If the parent does not receive these notices within a reasonable time, he should make inquiry and see if the birth was reported.

Since North Carolina has been in the United States Registration Area, it has been necessary to make copies of all birth and death certificates and forward them to the Census Bureau at Washington.

In order to make the tabulations necessary to furnish the information which the Bureau of Vital Statistics is constantly being called upon to provide, a card is punched for each birth and death, and these cards are run through machines which automatically sort and count them.

To the individual, a birth certificate will furnish proof, which will be accepted in every civilized nation on earth, of the place of birth, the time of birth, and parentage. The place of birth as recorded on the birth certificate may be used to establish citizenship or to establish residence. It is necessary in order to obtain a passport. The time of birth may be used to prove age, to obtain admission to school, to establish the right to work, to qualify for Civil Service Examination, to hold public office, to establish the right to vote, to obtain a marriage license, to determine legal responsibility, or to prove qualification for or exemption from civil and military duty. Parentage, as stated in the birth certificate, is necessary to establish the right to inherit or bequeath property, to establish identity, to obtain settlement of insurance, to prove that parents have dependent children, to prove legitimacy or to furnish acceptable evidence of genealogy.

Death certificates may be used by individuals to furnish evidence in court, to secure pensions or life insurance, to establish titles and right of inheritance, or to give home seekers and immigrants a guidance in selecting safe and healthful homes.

To organizations interested in health problems and procedures, birth and death records are used to determine the magnitude of health hazards, to plan new activities, to prevent epidemics, and to evaluate procedures. Since we use these records as a yard stick for measuring our problems and progress, it is essential that they be accurate.

The total number of live births reported in 1929 was 77,164; in 1930, 76,717; and in 1931, 74,743. This gives us a birth rate of 25.9 per 1,000 population for 1929; 24.1 for 1930; and 23.2 for 1931. The total number of stillbirths was 3,338 for 1929; 3,749 for 1930; and 3,646 for 1931. The birth rate in this state has declined from 31.2 in 1914 to a low of 23.2 for the present year, with a high rate of 33.4 for the year 1921. Although this decline in the birth rate of North Carolina has been marked, it has been paralleled by a similar decrease in the birth rates throughout the United States.

As indicated by the death rate, the health record for North Carolina for the year 1931 is the best that the state has ever experienced. In 1930 there was 35,739 deaths in the state; in 1931 there were 33,069. Death rates per 1,000, computed on the basis of estimated populations, are as follows: 1926, 12.1; 1927, 11.3; 1928, 12.3; 1929, 12.4; 1930, 11.2; 1931, 10.2. Our death rate compares favorably with the death rates of other states. Our low rate is especially noteworthy when it is considered that 29.4% of our population is colored and that this group has a much higher death rate than that prevailing among a white population. The 29.4% of our population which is colored contributed 38.7% of all our deaths in 1931. The race and sex distribution of deaths from all causes for the year 1930 are given in Table No. 1, and for 1931 in Table No. 2.

TABLE No. 1
DEATHS FROM ALL CAUSES, ENTIRE STATE—1930

Color	Number			Distribution per 1,000		
	Total	Male	Female	Total	Male	Female
White.....	21,609	11,622	9,987	604.6	623.3	581.2
Indian.....	175	95	80	4.8	5.0	4.1
Colored.....	13,955	6,927	7,028	390.6	371.7	411.7
Totals.....	35,739	18,644	17,095	1,000.0	1,000.0	1,000.0

TABLE No. II
DEATHS FROM ALL CAUSES, ENTIRE STATE—1931

Color	Number			Distribution per 1,000		
	Total	Male	Female	Total	Male	Female
White.....	20,107	10,900	9,207	608.0	628.7	585.2
Indian.....	158	87	71	4.8	5.1	4.5
Colored.....	12,864	6,350	6,454	387.2	366.2	410.3
Totals.....	33,069	17,337	15,732	1,000.0	1,000.0	1,000.0

Mortality from the principal causes of death in North Carolina show many changes in the last fifteen years. The rates for the infectious diseases have been lowered and those for the chronic degenerative diseases have increased. Tuberculosis has fallen from first place in 1916 to sixth in 1931. Heart disease has advanced from fourth to first place in the same period. Tuberculosis in 1916 caused considerably more deaths than all forms of pneumonia, the disease causing the second greatest number of deaths. The 1931 rate for tuberculosis was 71.4 per 100,000 population, which is less than half of the rate in 1916, 144.6. Nephritis has advanced from seventh place in 1916 to second in 1931. The rate for violent deaths (suicide excepted) has increased from 59.6 per 100,000 population in 1916 to 71.1 in 1931. This increase has been due largely to automobile accidents. The greatest improvement in mortality is shown in the lowered rate for diarrhea and enteritis, in which there was a decrease from a rate of 91.9 in 1916 to 24.4 in 1931. Heart disease, nephritis, cerebral hemorrhage, embolism, thrombosis and cancer accounted for 6,723 deaths in 1916 and for 11,518 deaths in 1931, or over one-third of all deaths for 1931.

The 1931 mortality record shows a decline in total deaths over 1930; a marked decline in deaths under one year, deaths from tuberculosis, diphtheria, whooping cough, diarrhea and enteritis under two years of age and pellagra. Fewer deaths were reported from tuberculosis, diphtheria, diarrhea and enteritis under two years of age, and infant deaths in 1931 than ever before. With the exception of 1930, we have never recorded so few deaths from typhoid fever.

There were 155 deaths from typhoid fever in 1931, three more than in 1930. The trend in typhoid fever death rates has been consistently downward since 1914. In that year the rate was 35.5 per 100,000 population. The 1931 rate was 4.9, the lowest recorded to date.

Regarding pellagra, the highest death rate ever recorded from this disease in North Carolina occurred in 1930 when 1,015 deaths were reported as due to this cause. This is a rate of 31.8 per 100,000. In 1931 the rate was 21.6, representing 696 deaths from pellagra and this rate is materially less than that recorded in any of the past five years.

The greatest improvement in the trend of mortality in the communicable diseases is shown for diphtheria. In the three years 1914, 1915, and 1916, diphtheria caused 1,314 deaths. This is compared with the 829 deaths from diphtheria reported in 1929, 1930, and 1931. Diphtheria is a disease for which we have a specific protective vaccination and is, therefore, a disease against which public health activities can be very effective. It is to be noted that approximately five-sixths of the deaths from diphtheria occur in children under five years of age. This points out the group in which prophylactic measures can be applied most profitably.

Infants under one year, comprising approximately 2.4 per cent of the population, suffered 16.5 per cent of the total deaths. However, the death rate per thousand reported live births was 73 in 1931, which is the lowest recorded rate in the 18 years of registration. It is a matter of satisfaction that the trend in mortality in this group is downward, though it is still far above what it should be. Even with this great improvement in the infant mortality rate, it is higher than that of the United States Registration Area as a whole. The 1931 rate for the 46 registration states, according to the provisional report of the United States Census Bureau, is 61.7.

It is important, both to individuals and to health organizations, that we have complete and acceptable records of all births and deaths which occur in the state. We can only attain that objective when physicians, undertakers, midwives, registrars, and individuals do their part. Since birth and death certificates are important documents, it is essential that we have the legal signatures of physicians, midwives, and registrars. If everyone who has responsibility in connection with birth and death certificates will give the consideration to these documents which their importance deserves, we can have records which will fill the needs of individuals, and which will make health protection more effective.

EPIDEMIOLOGY

The section of epidemiology under the Division of County Health Work and Epidemiology has, during the biennium, carried on the usual functions of this service.

The usual office routine consists in (1) recording and analyzing the daily reports of communicable diseases sent in by physicians of the State; (2) preparation of various spot maps, charts and graphs to visualize the distribution of these cases over the State and their relation to incidence in former years; (3) preparation of weekly bulletins showing distribution of the nine principal reported diseases in the one hundred counties, which are mailed out to all county health officers and others interested in this reporting; (4) preparation of a monthly analytical report with statement of status of infectious disease incidence for the State as a whole; (5) preparation of a weekly telegram and monthly report for the Surgeon General of the U. S. P. H. S., giving incidence of all reportable diseases; (6) distribution of blank forms, placards and informative literature pertaining to the control of communicable diseases; (7) analysis of reports for age and sex distribution for typhoid fever, pellagra, diphtheria, and scarlet fever; (8) the checking of death certificates for completing case reporting; (9) keeping an investigation record of each case of typhoid fever for the purpose of correlating the incidence of this disease with the sanitary status of the area where it occurs.

Special investigations of outbreaks are made by the service when the reports sent in show unusual incidence of disease in any particular area, or when help is asked for the local health officer. During the biennium several such investigations were made. Certain unusual diseases, whose epidemiological characters are not well understood, are also investigated on the appearance of the first case. The epidemiological service has before it the records of case incidence of communicable diseases for the entire State and so is in a key position to estimate the prevalence and to know when this takes epidemic proportions. It can be reemphasized that this judgment is based on reports received, and is liable to grave errors when reporting is too incomplete.

Incidence. Herewith is given the incidence by month of reported diseases for the calendar year 1931 for the State as a whole.

REPORTABLE DISEASES—REPORTED CASE INCIDENCE BY MONTHS—1931

	Total	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Anthrax.....	1								1				
Chancroid.....	94	15	10	7	7	9	4	2	6	17	2	6	9
Chicken Pox.....	4856	1031	813	718	556	445	193	42	5	47	109	389	508
Diphtheria.....	3156	169	114	104	91	60	57	60	132	453	865	691	360
Endemic Typhus.....	14	1		1			1	2	5			3	1
German Measles.....	9384	668	1756	2813	2651	1052	299	50	15	13	12	12	13
Gonorrhea.....	2286	234	152	188	168	130	178	172	129	392	220	143	180
Influenza.....	4739	2096	1534	519	123	118	14	2	5	8	18	214	88
Measles.....	15499	526	1446	2980	3805	3296	2307	513	76	31	148	184	187
Meningococcus Meningitis.....	123	8	20	21	16	15	10	1	5	4	5	9	9
Opthalmia Neonatorum.....	12		3	2			1	2	2	1	1		
Paratyphoid.....	27					1	4	5	10	4	2		1
Pellagra.....	2820	68	72	73	124	402	595	886	146	74	89	177	114
Poliomyelitis.....	104	5	2	1	1	2	3	10	28	21	14	12	5
Scarlet Fever.....	3461	324	274	219	176	169	98	83	132	297	581	714	394
Septic Sore Throat.....	153	14	10	4	10	23	5	11	8	13	28	15	12
Smallpox.....	63	11	8	5	6	13	6	1	2		5	4	2
Syphilis.....	5144	467	460	473	462	357	446	345	404	483	524	368	355
Trachoma.....	6	2	2	2									
Tuberculosis.....	3106	255	263	262	370	354	327	222	227	246	256	159	165
Tularemia.....	3		2		1								
Typhoid Fever.....	991	16	8	5	11	16	94	228	212	198	114	64	25
Whooping Cough.....	6992	374	386	637	740	846	1091	734	388	363	345	536	552

When the State as a whole is considered, it can be stated that there has been a definite decline in the incidence of typhoid fever and smallpox. These are the two diseases against which control campaigns on the part of the public health authorities are most effective in this State, that is, sanitation as prophylaxis against typhoid fever and vaccination against smallpox. It is to be noted that in this period of decline of smallpox there has been a tremendous increase in reported cases of chicken pox, these reaching a maximum of 6,982 cases in 1930.

As regards diphtheria, the death rate has shown a trend downward with the lowest recorded rate occurring in 1931, but this decline has not been continuous and 1922 showed the second highest rate since recording of death was instituted. Case reporting of diphtheria reached a peak in 1922 with 8,136 cases reported. 1931, with 3,156 reported cases, was the lowest year except for 1918 when reporting was first instituted, but the number has shown no definite trend downward in the last seven years. Diphtheria being a disease for which a very definite protective vaccination is available, a better showing would be expected, but the lack of results is definitely related to the fact that only an extremely small percentage of the age groups in which diphtheria is most prevalent have received this protective vaccination.

It is noteworthy that regarding whooping cough, measles and scarlet fever, cycles of high incidence continue to recur at more or less definite

intervals without any noticeable general trend downward. This would be expected of diseases of great communicability against which no specific protective measures are available, other than isolation and quarantine. The years of maximum prevalence for the State as a whole do not necessarily coincide with the peaks in any one local area, since the State as a whole is too large an area to be considered as one epidemic unit for these diseases. While absolute control of these diseases is not yet possible, still improved facilities are available for reducing the percentage of cases which die. Deaths from whooping cough exceed considerably those from typhoid fever and totaled 211 in 1931.

Communicable Disease Control. In counties having full time health organizations the State Board of Health depends upon this personnel to carry out the recommended immunization programs against typhoid fever, smallpox, and diphtheria. In counties without such full time personnel a program has been instituted whereby the immunization against typhoid fever and diphtheria are carried out by the regular licensed physicians of the county. This program is set forth in the following contract which can be voluntarily entered into by the county commissioners of any county wishing to avail itself of State aid for this purpose:

TYPHOID FEVER AND DIPHTHERIA PREVENTION CAMPAIGN

....., N. C.,
 19.....

N. C. State Board of Health,
 Raleigh, N. C.

Gentlemen:

We, the Board of County Commissioners of.....
 County, agree to pay to the regular licensed physicians of this county
 twenty-five cents (25c.) for each resident of the county to whom they
 administer three injections of typhoid vaccine, three injections of diph-
 theria toxin antitoxin, or two injections of diphtheria toxoid, provided:

1. That the immunization campaign be approved by the County Medical Society.
2. That every regular licensed physician in the county be permitted to participate in the work.
3. That no claim for compensation be submitted by the physicians for administering diphtheria immunization treatments to any person over ten years of age.
4. That each physician who participates in the campaign keep an accurate record of the names, addresses and injections of each person immunized on forms supplied by the State Board of Health.
5. That these records, on completion of the campaign, be sent to the State Board of Health.
6. That the State Board of Health will certify to the County Commissioners the correctness of the records and the amount to be paid to each physician.
7. That the County Commissioners pay to each physician so certified an amount equal to 25c. for each complete immunization treatment, the total amount to be stated in the certification.
8. That the County Commissioners submit to the State Board of Health a statement setting forth the exact amount paid by them to the physicians participating in the campaign.
9. That the State Board of Health will then reimburse the County offifty per cent (50%) of the amount actually paid to the physicians of the county if this amount has been properly certified to by the State Board of Health; provided, however, that the State Board of Health's financial participation shall not be in excess of \$1,200.00.
10. The State Board of Health agrees to furnish free placards to be used in advertising the vaccination clinics, free typhoid vaccine, and diphtheria toxin antitoxin or diphtheria toxoid at as low a cost as possible.

Signed....., Chairman,
 Board of County Commissioners
 of.....County.

Approved:, Secretary
 County Medical Society.

Signed.....
 State Board of Health.

During the biennium twenty-one counties carried out this immunization program with the results set forth in the following table:

County	Date	Number Taking Three Doses Typhoid Vaccine	Number Taking Three Doses Toxin Antitoxin
Alexander.....	1930	6,506	1,635
Burke.....	1930	10,332	2,740
Caldwell.....	1930	12,445	3,010
Gates.....	1930	2,993	779
Harnett.....	1930	13,496	3,104
Stanly.....	1930	10,000	6,653
Alamance.....	1931	5,847	1,583
Chowan.....	1931	3,035	180
Hertford.....	1931	7,329	1,580
Hoke.....	1931	5,469	1,581
Iredell.....	1931	17,185	2,868
Lee.....	1931	5,780	1,017
Mitchell.....	1931	3,426	671
Montgomery.....	1931	978	124
Onslow.....	1931	7,524	3,026
Perquimans.....	1931	3,496	0
Scotland.....	1931	8,283	1,157
Stokes.....	1931	7,460	2,326
Transylvania.....	1931	963	137
Lincoln.....	1932	11,920	2,065
Pender.....	1932	0	92
Totals.....		144,467	36,328
Totals (6 counties).....	1930	55,772	17,921
Totals (13 counties).....	1931	76,775	16,250
Totals (2 counties).....	1932	11,920	2,157

In the biennial report preceding this one eighteen counties were listed which had carried through the program in that period. It is recommended by the State Board of Health that this campaign be repeated in each county every third year.

In counties without full time health personnel, the law requires that a quarantine officer be elected whose duty is to receive reports of communicable diseases and forward them to the State Board of Health. The State Board of Health reimburses the county treasurer for one-half of the fifty-cent fee which the quarantine officer collects from the county for each case reported and placarded.

Venereal Disease Control. Venereal disease control, from a public health standpoint is primarily a matter of providing treatment facilities for syphilis so that every infected case may find it possible to receive treatment to a complete cure. As it touches the organized health departments, this means principally the provision of clinics for treatment of indigent cases.

The State Board of Health, during the biennium, has not maintained any venereal disease clinics. However, throughout the State a total of

thirty-four clinics in thirty counties have been in operation and have been conducted with varying degrees of efficiency. One of the outstanding needs in venereal disease control is the provision of clinics sufficiently scattered throughout the State that they are readily accessible to the population in every county. At present about two-thirds of the counties have no such clinics available for treatment of the indigent venereally infected.

Reports of cases of venereal disease come to the Department through the hands of local health officers. Certain informative literature is distributed by the State Board of Health on request to individuals or departments requesting it.

In the latter part of the previous biennium a syphilis prevalence study and treatment control demonstration among Negroes was begun in Pitt County. This activity was financed by the Julius Rosenwald Fund and was under the supervision of the United States Public Health Service. The primary Wassermann survey in the county was carried out from April to July, 1930, after which the treatment control feature of the demonstration was inaugurated. In the survey eleven per cent of 10,198 Negroes tested were found to be infected with syphilis.

This demonstration was carried on for eighteen months during the present biennium, the first twelve months with support of the Rosenwald Fund which withdrew June 30, 1931. After a lapse of six months it was resumed January 1, 1932, with financial aid from the United States Public Health Service. During these eighteen months the treatment campaign was carried forward and 10,159 blood specimens from patients were secured.

In the latter part of the biennium a consultant of the United States Public Health Service was sent to North Carolina on a preliminary assignment and was instrumental in the preparation and distribution of informative material relating to syphilis therapy as follows: an outline of the treatment of the usual case of syphilis, a symposium on the principles of syphilis therapy, and an article relating to the interpretation of the Wassermann test. These materials were distributed to county and city health officers operating syphilis clinics.

COUNTY HEALTH WORK

North Carolina has been a pioneer among the states in the field of county health work. The first whole-time County Health Department in the United States was inaugurated in Guilford County June 1, 1911.

The history of county health work is given briefly in Table No. 1. The present status of county health work is given in Table No. 2. The work performed during the biennium is given in Table No. 3.

A definite policy has been adopted for the allocation of funds, the qualifications of personnel, the development of a program of activities, the accounting for finances, and the reporting of activities.

Board Policies for Allocation of Funds to Counties for Health Work

The State Board of Health will not allocate funds to a county or district health department unless the health officer has had at least two years of experience satisfactory to the State Board of Health in public health administration, unless such health officer has had adequate training in, or holds a certificate from an approved training school for health officers; provided, whenever and where it is necessary to employ inadequately trained men as health officers, the State Board of Health will approve such employment as a temporary measure only, and contingent upon proper and satisfactory assurance that reasonably prompt training will be had, and in furtherance of this idea, the State Board of Health will endeavor to secure scholarships in approved training stations or schools for those whom it considers to be qualified for such training. However, it is definitely understood that the State Board of Health assumes no financial responsibility for such studies. In evaluating the qualifications of candidates for scholarships, consideration will be given fundamental training, character, personality, and age. The State Board of Health will not recommend any candidate whom it considers to be unqualified.

In the future, the State Board of Health will allocate funds to county or district health departments on the basis of all local official funds available to the health department. Counties, cities, towns, townships, boards of education, and trustees of special chartered school districts may appropriate money to their local health department and the State Board of Health will consider the total of such official funds in making its allocations.

The basis of allocation will be:

1. To standard unit county health departments, that is, health departments having at least a whole-time health officer, a whole-time public health nurse, a whole-time sanitary inspector, and a whole-time secretary, the State Board of Health will allocate 33 1-3% of the total official budget, such allocation not to exceed \$2,400.00, (for each \$1.00 of local official funds available, the State Board of Health will add 50c.).

2. To counties having a three-piece health department, consisting of only a whole-time county health officer, a whole-time public health nurse, and a whole-time secretary; or a whole-time health officer, a whole-time sanitary inspector, and a whole-time secretary; or a whole-time health

officer, a whole-time public health nurse, and a whole-time sanitary inspector, the State Board of Health will allocate 30% of the total official budget, such allocation not to exceed \$2,200.00, (for each \$1.00 of local official funds available, the State Board of Health will add 43c.). Provided, that where the health officer has extensive and outstanding experience in the opinion of the State Board of Health, allocations may be made on the basis of a standard unit health department as defined in No. 1.

3. To counties having only a two-piece health department with a whole-time health officer and a whole-time public health nurse; or a whole-time health officer and a whole-time sanitary inspector, the State Board of Health will contribute 25% of the total official budget, such allocation not to exceed \$1,800.00, (for each \$1.00 of local official funds available, the State Board of Health will add 33c.).

4. In the future, no allocations will be made to counties with only a county health officer, or only a county public health nurse, or only a county sanitary inspector, or only an inspector and nurse and no medical officer, except for such counties as already have this type of health work. To such counties, the State Board of Health will allocate 20% of the total official budget, such allocation not to exceed \$1,200.00, (for each \$1.00 of local official funds available, the State Board of Health will add 25c.).

5. Allocations to counties having part-time health officers and whole-time nurses and sanitary inspectors will be on the basis of a two-piece health department as defined in No. 3, except when manned or directed by an experienced health officer of known and proved exceptional ability and outstanding service, and then on the basis of 27½% of the total official budget, such allocation not to exceed \$2,000.00, (for each \$1.00 of local official funds available, the State Board of Health will add 38c.).

6. To counties included in an approved health district, the State Board of Health will employ the health officer and pay his entire salary, the travel of the director of the district health service, pay the salary of the clerk in the central office, and will allocate to each county \$300.00 for a nurse and \$300.00 for a sanitary inspector.

7. To counties with no whole-time public health workers, the State Board of Health will reimburse the county for one-half the amount paid to the quarantine officer for the fees earned under Section No. 7150 of the Consolidated Statutes. The State Board of Health will also reimburse the county for one-half the fees paid physicians for complete immunizing treatments against diphtheria and typhoid fever; provided, the State Board of Health has approved a contract with the county for this purpose. The State Board of Health will not reimburse counties for the salaries or fees, or any part thereof, paid to county physicians.

Contract With County Health Departments

It is agreed that funds will be appropriated or allocated on the basis of the official budget of the.....County Health Department, acting for itself and other local official services, a copy of which is attached hereto, and that payments will be made in equal monthly installments to the.....County Health Department by all participating parties in accordance with the following provisions:

1. That the County Board of Health employ a qualified health officer who shall:
 - (a) Be a reputable physician holding a degree of Doctor of Medicine from a Grade A medical school and a license to practice issued by the State Board of Medical Examiners.
 - (b) Be a man of good moral character, without objectionable habits.
 - (c) Have at least two years of experience in public health administration satisfactory to the State Board of Health, or hold a certificate from an approved training school for health officers.
2. That a program of health work be adopted and carried out as approved by the State Board of Health.
3. That records of activities be kept on forms supplied or approved by the State Board of Health.
4. That the County Health Department render to the State Board of Health a statistical and a narrative report of monthly activities not later than the fifth of the following month for which the report is intended, and such other special reports as the State Board of Health may request.
5. That the County Health Department render to the State Board of Health a financial report at the close of each month and at the end of the budgetary period.
6. That the State Board of Health deduct from its monthly payment to the County Health Department the sum of one dollar (\$1.00) for each inaccurate or incomplete report submitted, when such inaccuracy is due to gross negligence.
7. That the County Health Officer have sole authority to employ, direct, and replace all other members of the staff of the County Health Department, it being understood that he is to employ only qualified individuals.
8. That vacation time, sick leave, and petty leave be the same for the members of the staff of the County Health Department as for State employees, and that such legal holidays be observed by the staff of the County Board of Health as are observed by other local county offices, and that the State Board of Health be notified whenever any employee of the county department takes leave in excess of the amount herein stated.
9. That the County Health Department refrain from doing any clinical medicine other than that required by law or as determined when contract is signed.
10. That salaries, travel allowance, and other personal expenses of the staff of the County Health Department be approved by the State Board of Health.
11. The State Board of Health reserves to itself the right to cancel this contract upon written notice to the County Health Officer at any time before the fifteenth of the current month, if, in the opinion of the State Board of Health, the contract is not being carried out effectively and in good faith by the County Health Department.

Signed:..... Signed:.....

For..... For

Practically all public health authorities are of the opinion that successful local health work is dependent upon the qualifications of the personnel comprising the local health department. The policy of the Board, which requires satisfactory experience or adequate professional training as a prerequisite of all county health officers, has received widespread approval. One of the large Foundations expressed its willingness to aid the Board by making funds available for scholarships in training stations and in schools of public health. The effectiveness of local health

work will be increased with the improvement of the professional qualifications of the health worker.

Approximately 64% of the population of the State is now receiving protection from some type of whole-time local health work. Although there are counties in the State that are too poor to pay for a standard unit health department, the residents of these counties deserve protection. One of the fundamental police duties of the State is the protection of human life. The State Board of Health, in providing for the creation of health districts comprising three or more counties, has recognized the right of every citizen in the State to have protection from preventable diseases. It has provided a method whereby organized health activities can be extended over a wider area. No thoughtful citizen of North Carolina will be satisfied until one hundred counties of the State have a reasonably adequate health program.

TABLE No. I—CHRONOLOGY FULL-TIME COUNTY

No.	County	1911	1912	1913	1914	1915	1916	1917	1918	1919
1	Guilford.....	Gui.	Gui.	Gui.	Gui.	Gui.	Gui.	Gui.	Gui.	Gui.
2	Robeson.....		Rob.	Rob.	Rob.	Rob.	Rob.	Rob.	Rob.	Rob.
3	Durham.....			Dur.	Dur.	Dur.	Dur.	Dur.	Dur.	Dur.
4	New Hanover.....			N.H.	N.H.	N.H.	N.H.	N.H.	N.H.	N.H.
5	Buncombe.....			Bun.	Bun.	Bun.	Bun.	Bun.	Bun.	Bun.
6	Columbus.....			Col.	Col.					
7	Forsyth.....			For.	For.	For.	For.	For.	For.	For.
8	Rockingham.....			Roc.	Roc.					
9	Sampson.....			Sam.	Sam.	Sam.	Sam.	Sam.	Sam.	Sam.
10	Johnston.....			Joh.	Joh.					
11	Nash.....					Nash	Nash	Nash	Nash	Nash
12	Wilson.....						Wil.	Wil.	Wil.	Wil.
13	Davidson.....							Dav.	Dav.	Dav.
14	Lenoir.....							Len.	Len.	Len.
15	Northampton.....							Nor.	Nor.	Nor.
16	Pitt.....							Pitt	Pitt	Pitt
17	Mecklenburg.....								Mec.	Mec.
18	Rowan.....								Row.	Row.
19	Wake.....								Wake	Wake
20	Edgecombe.....									Edg.
21	Cumberland.....									Cum.
22	Cabarrus.....									Cab.
23	Granville.....									Gra.
24	Halifax.....									Hal.
25	Surry.....									Sur.
26	Vance.....									
27	Wayne.....									
28	Wilkes.....									
29	Craven.....									
30	Bertie.....									
31	Bladen.....									
32	Carteret.....									
33	Beaufort.....									
34	Henderson.....									
35	Pamlico.....									
36	Warren.....									
37	Brunswick.....									
38	Hyde.....									
39	Rutherford.....									
40	Richmond.....									
41	Randolph.....									
42	Moore.....									
43	Gaston.....									
44	Person.....									
45	Union.....									
46	Alleghany.....									
47	Alamance.....									
48	Franklin.....									
49	Cherokee.....									
50	Stokes.....									
51	Yadkin.....									
52	Caldwell.....									
53	Haywood.....									
54	Watauga.....									

*Nurse. †Inspector. ‡District.

HEALTH WORK ORGANIZATION—1911-1932

[illegible]

TABLE No. II—DATA ON FULL TIME COUNTY

County	1930 Population	Date of Organ- ization	Total Budget	
			Amount	Per Capita
Beaufort	35,026	1923	\$ 8,025.00	.230
Bladen	22,389	1921	4,006.52	.179
Buncombe (exclusive of Asheville).....	47,744	1913	18,900.00	.397
Cabarrus.....	44,331	1919	7,427.91	.167
Columbus.....	37,720	1921	3,830.77	.101
Cumberland.....	45,219	1919	9,717.73	.215
Davidson	47,865	1917	7,068.38	.148
Durham.....	67,196	1913	46,989.00	.700
Edgecombe (exclusive of Rocky Mount).....	37,872	1919	7,754.00	.205
Forsyth (exclusive of Winston-Salem).....	36,407	1913	24,463.00	.670
Franklin.....	29,456	1930	6,987.50	.237
Gaston.....	78,093	1928	10,271.50	.133
Granville.....	28,723	1919	8,440.00	.295
Guilford (exclusive of Greensboro and High Point).....	42,696	1911	14,040.80	.329
Halifax.....	53,246	1919	10,200.00	.191
Lenoir.....	35,716	1917	7,800.00	.219
Mecklenburg (exclusive of Charlotte).....	45,296	1918	13,180.00	.291
Moore.....	28,215	1928	5,100.00	.182
Nash (exclusive of Rocky Mount).....	41,392	1915	3,757.67	.091
New Hanover.....	43,010	1913	36,396.12	.844
Northampton.....	27,161	1917	6,310.00	.232
Pitt	54,466	1917	13,030.00	.239
Randolph	36,259	1927	3,110.35	.086
Richmond.....	34,016	1924	6,600.71	.194
Robeson.....	66,512	1912	8,002.50	.121
Rowan.....	56,665	1918	9,530.00	.168
Rutherford.....	40,452	1924	6,030.61	.149
Sampson.....	40,082	1913	8,130.00	.206
Stokes-Yadkin(Forsyth-Stokes-Yadkin Health Dist.) ..	40,300	1931	8,640.00	.214
Surry.....	39,749	1919	9,312.34	.235
Vance	27,294	1920	4,602.10	.169
Wake.....	94,757	1918	25,872.05	.274
Wayne.....	53,013	1920	9,809.94	.185
Wilkes.....	36,162	1920	6,264.32	.174
Wilson.....	44,914	1916	7,731.60	.172
Totals.....	1,539,414		\$ 387,332.42	.251
COUNTIES WITH NURSE OR SANITARY INSPECTOR				
Alleghany.....	7,186	1930	\$ 1,800.00	.250
Brunswick.....	15,818	1924	1,940.00	.123
Caldwell.....	28,016	1931	1,875.00	.067
Craven.....	30,665	1921	5,328.00	.174
Haywood	28,273	1931	2,125.20	.075
Pamlico.....	9,299	1923	2,253.93	.242
Person.....	22,039	1929	3,054.38	.139
Totals.....	141,296		\$ 18,376.51	.130

NOTE.—Ocracoke Island in Hyde County—State Board of Health contributing \$600.00 per year and United States Public Health Service \$600.00 per year toward the salary of a part-time physician and health officer.

Polk County—State Board of Health contributing \$400.00 per year and the American Women's Hospital Association \$2,500.00 per year toward budget for public health nursing program.

*Includes Clinician. †Non-medical Health Officer. ‡Includes Dentist.

**Includes Technician. ††Forsyth County Health Officer Director.

HEALTH SERVICES, FISCAL YEAR 1932-1933

Source of Funds and Amounts						Whole-Time Personnel				
Local Appropriation	Per Capita	State Allotment	Per Capita	Extra State Funds	Per Capita	Health Officer	Other Medical Officer	Nurse	Inspector	Clerk
\$ 4,150.00	.119	\$ 2,075.00	.060	\$ 1,800.00	.051	1	0	1	1	1
3,006.52	.134	1,000.00	.015	-----	-----	1	0	1	0	0
16,500.00	.345	2,400.00	.052	-----	-----	1	*1	2	2	1
5,227.91	.118	2,200.00	.049	-----	-----	1	0	1	0	1
3,165.30	.084	665.47	.017	-----	-----	1	0	0	0	1
5,836.48	.129	2,400.00	.053	1,481.25	.033	1	0	3	1	1
5,068.38	.106	2,000.00	.042	-----	-----	1	0	1	0	1
44,589.00	.665	2,400.00	.035	-----	-----	†1	‡2	7	5	**3
4,736.00	.125	2,368.00	.063	650.00	.017	1	0	1	1	1
22,063.00	.604	2,400.00	.066	-----	-----	1	1	5	1	1
3,600.00	.122	1,800.00	.061	1,587.50	.054	1	0	1	0	1
7,871.50	.101	2,400.00	.032	-----	-----	1	0	2	0	1
4,220.00	.147	2,110.00	.074	2,110.00	.074	1	0	1	1	1
11,640.80	.273	2,400.00	.056	-----	-----	1	†1	2	1	1
6,331.00	.119	2,400.00	.045	1,469.00	.027	1	0	2	1	1
5,400.00	.151	2,400.00	.068	-----	-----	1	0	1	1	1
10,780.00	.238	2,400.00	.053	-----	-----	1	‡2	2	0	1
3,400.00	.121	1,700.00	.061	-----	-----	1	0	1	0	1
2,724.31	.066	1,033.36	.025	-----	-----	1	0	1	0	1
33,636.12	.780	2,400.00	.056	360.00	.008	1	1	5	8	**2
2,740.00	.100	1,370.00	.050	2,200.00	.082	1	0	1	0	1
5,905.00	.108	2,400.00	.044	4,725.00	.087	1	*1	2	0	1
2,488.35	.069	622.00	.017	-----	-----	1	0	0	0	1
4,200.71	.123	2,100.00	.062	300.00	.009	1	0	1	0	1
5,302.50	.080	2,400.00	.036	300.00	.005	1	0	1	0	1
7,130.00	.126	2,400.00	.042	-----	-----	1	0	1	1	1
4,630.61	.114	1,400.00	.035	-----	-----	1	0	0	1	0
3,727.50	.091	2,100.00	.053	2,302.50	.057	1	0	1	1	1
1,820.00	.045	3,980.00	.099	2,840.00	.070	††-----	0	4	1	0
3,612.34	.091	1,800.00	.045	3,900.00	.099	1	0	1	1	1
3,463.77	.127	1,138.33	.042	-----	-----	1	0	0	1	0
23,472.05	.249	2,400.00	.025	-----	-----	1	†1	5	3	**2
6,999.94	.132	2,400.00	.045	410.00	.008	1	0	1	2	1
3,604.32	.100	1,660.00	.046	1,000.00	.028	1	0	1	0	1
5,331.60	.119	2,400.00	.053	-----	-----	1	0	1	1	1
\$ 288,375.01	.187	\$ 71,522.16	.046	\$ 27,435.25	.018	34	10	60	35	35
AS DIRECTOR OF LOCAL HEALTH PROGRAM										
\$ 1,350.00	.188	\$ 450.00	.062	-----	-----	0	0	1	0	0
1,552.00	.098	388.00	.025	-----	-----	0	0	1	0	0
1,500.00	.053	375.00	.014	-----	-----	0	0	0	1	0
3,996.00	.130	1,332.00	.044	-----	-----	0	0	1	2	0
1,721.45	.061	403.75	.014	-----	-----	0	0	0	1	0
1,893.93	.203	360.00	.039	-----	-----	0	0	2	0	0
2,054.38	.093	1,000.00	.046	-----	-----	0	0	1	0	1
\$ 14,067.76	.100	\$ 4,308.75	.030	-----	-----	0	0	6	4	1

TABLE No. III—COUNTY HEALTH ACTIVITIES

BIENNium JULY 1, 1930 TO JUNE 30, 1932

COMMUNICABLE DISEASE CONTROL

REPORTABLE DISEASES

	Cases	Quaran- tined by Mail	Quaran- tined by Visit	Return Visits
Cerebrospinal Meningitis.....	103	15	88	83
Chancroid.....	97			
Diphtheria.....	3,471	608	2,863	4,501
Gonorrhea.....	2,535			
Measles.....	19,529	5,142	14,387	2,254
Poliomyelitis.....	92	8	84	101
Scarlet Fever.....	3,489	527	2,962	2,599
Smallpox.....	90	12	78	60
Syphilis.....	6,196			
Tuberculosis.....	1,042			
Typhoid Fever.....	1,179	85	1,094	1,322
Whooping Cough.....	11,602	1,510	10,092	4,703
Others.....	18,627			

CONTROL PRACTICES

	<i>Number</i>
Diphtheria released without culture.....	830
Diphtheria released on one negative culture.....	518
Diphtheria released on two negative cultures.....	990
Typhoid released on negative culture.....	114
Laboratory examinations for typhoid carrier.....	407
Laboratory examinations for typhoid carrier in milk and food handlers.....	860
Smallpox contacts vaccinated.....	1,173
Child contacts to Scarlet Fever quarantined 7 days.....	4,015
Medical or nursing service to Ophthalmia Neonatorum.....	729
Diagnostic consultations to communicable diseases.....	7,151

HOSPITALIZATION

Typhoid.....	85
Diphtheria.....	137
Scarlet Fever.....	12
Smallpox.....	2

IMMUNIZATIONS

Completed toxin-antitoxin, preschool children.....	36,596
Completed toxin-antitoxin, school children.....	41,009
Completed anti-typhoid inoculations.....	344,262
Smallpox vaccinations, first grade school children.....	59,413
Smallpox vaccinations, other than first grade children.....	49,193

VENEREAL DISEASE CONTROL

	New Cases at Clinic	Total Cases at Clinic	Number Treatments Given	Discontinued Cases Returned
Syphilis	8,005	20,411	77,536	2,086
Gonorrhea.....	4,625	1,994	4,871	2,166
Chancroid.....	120	128	1,695	261

TUBERCULOSIS CONTROL

Nurses' visits to cases or contacts.....	14,210
Nurses' visits to post sanatoria cases.....	1,963
Visits to physicians or clinics for diagnosis or treatment.....	21,497
New cases registered with physicians or clinics for diagnosis or treatment.....	11,000
New cases hospitalized: (1) Incipient.....	398
(2) Advanced.....	663
(3) Under 15 years of age.....	839
Patient days in hospital.....	201,324
Children completing 6 weeks: (1) Open air class room.....	950
(2) Preventoria.....	445
(3) Day camp.....	2,258

HEALTH OF THE CHILD

PRENATAL

New prenatal cases visited by nurse.....	7,614
Nurses' visits to prenatal cases.....	10,756
Prenatal visits to physicians.....	3,447
Cases delivered in hospital.....	1,543
Midwives instructed and registered.....	3,670

INFANT

Nurse visits to infants under one year.....	42,252
Visits infants under one year to physicians.....	12,769
Visits infants under one year to nurses' conference.....	2,327

PRESCHOOL CHILD

Nurses' visits to children ages 1-5 years.....	33,693
Visits children ages 1-5 years to medical conference.....	22,936
Visits children ages 1-5 years to nurses' conference.....	6,756

HEALTH OF THE CHILD—CONTINUED

SCHOOL CHILD

Number schools children some grade weighed: (1) First.....	138,998
(2) Second.....	58,216
Number schools notification of weight sent to parents: (1) First.....	25,650
(2) Second.....	32,580
Number underweights weighed: (1) Every 2 weeks.....	6,255
(2) Every 4 weeks.....	73,438
School children examined by physician.....	132,611
Hours spent in examination by physician.....	9,215
Number schools in which physician examined children.....	3,246
Number parents present at time of examination.....	8,878
School children, vision, hearing and measurements made by teacher or nurse.....	213,846
School children inspected by physician or nurse.....	418,396
School children having teeth filled.....	46,803
School children having teeth extracted.....	36,665
School children having teeth cleaned.....	55,313
School children having glasses fitted.....	1,413
School children having tonsil and adenoid operations.....	9,230
School children having orthopedic defects corrected.....	597
School children with heart or lung defects placed under physician.....	2,006
Nurses' visits in behalf of grade school children.....	58,061
School children visiting nurses' conference.....	16,127
Number parents present at nurses' conference.....	3,320
School buildings inspected once per year.....	4,773

SANITATION

Sanitary inspections and reinspections.....	426,052
Food handlers examined.....	11,770
Dairy cows tuberculin tested.....	26,061
Dairy farms inspected.....	19,036
Rural water supplies improved.....	2,107
Rural privies built or improved.....	16,773
Urban privies built or improved.....	13,919
Sewer connections.....	1,991

LABORATORY

Examination for diphtheria.....	11,706
Examination for typhoid.....	1,563
Examination for tuberculosis.....	2,328
Examination for syphilis.....	28,898
Examination for gonorrhea.....	2,198
Examination of milk samples.....	21,248
Examination of water samples: (1) Public supplies.....	13,190
(2) Rural semi-public.....	4,316
Examination, others.....	17,116

POPULAR HEALTH INSTRUCTION

Number health pamphlets, placards, etc., distributed	570,294
Articles on health published in newspapers	4,819
Lectures or talks on health	7,987
Showing of motion pictures on health	422
Special demonstrations to promote health work	4,510

COUNTY PHYSICIAN REPORT

Examination, prisoners	24,950
Examination for marriage	5,372
Examination, teachers	8,776
Examination, child for industry	2,841
Examination by court order	837
Examination for admission to institution	2,763
Examination for lunacy	2,055
Examination, postmortem	256
Visits to jail	9,845
Visits to convict camp	3,689
Visits to county home	8,875
Visits to county tuberculosis hospital	1,828
Completed anti-rabic treatments	221
Treatment, hookworm	1,079

DIVISION OF ORAL HYGIENE

The new Board of Health, which came into power July 1, 1931, set up the Division of Oral Hygiene as an integral part of the State Board of Health.

While it is true that actual dental work is done in the mouths of school children, the major purpose of this activity is to teach mouth health by visual education methods. Didactic teaching is done by the dentist in the grades, before Parent-Teachers Associations, etc. We have demonstrated beyond any question that this teaching, both didactically and by demonstration, is reacting favorably in the schools, and notable improvement in health conditions is manifest among the children.

This evidence is so conclusive that we have been able to secure funds from counties and the State Board of Equalization to augment those funds available in our own budget to such a point that we have enlarged our staff of dentists beyond that of any previous year.

Mouth Health Programs have been conducted during the biennium in the cities of High Point, Winston-Salem, Asheville, and Gastonia, as well as in the following counties: Alamance, Alexander, Anson, Alleghany, Ashe, Avery, Bertie, Brunswick, Buncombe, Burke, Cabarrus, Camden, Carteret, Caswell, Catawba, Chatham, Cherokee, Chowan, Columbus, Craven, Cumberland, Currituck, Davie, Duplin, Durham, Edgecombe, Forsyth, Franklin, Gaston, Gates, Graham, Greene, Guilford, Harnett, Haywood, Henderson, Hertford, Hyde, Iredell, Jackson, Lincoln, Macon, Madison, Martin, Mecklenburg, Mitchell, Montgomery, Moore, Nash, New Hanover, Northampton, Onslow, Orange, Pamlico, Pasquotank, Pender, Perquimans, Person, Pitt, Richmond, Robeson, Rockingham, Rowan, Rutherford, Stanly, Surry, Swain, Tyrrell, Union, Vance, Wake, Watauga, Wayne, Wilkes, Yadkin, Yancey.

Mouth Health Programs were also conducted in the Methodist Orphanage, the Children's Home (Winston-Salem), the State School for the Blind (both white and colored).

During this period 93,938 children were examined; 72,221 children were treated; 14,313 were referred to their dentists for treatment. 1,253 lectures on Mouth Health were delivered by the staff, with an approximate attendance of over one hundred thousand people.

The summary of treatments is as follows:

Number of amalgam fillings	52,198
Number of cement fillings	5,172
Number of silver nitrate treatments	101,856
Number teeth extracted	56,672
Number children—teeth cleaned	69,183
Number miscellaneous treatments	2,941
Total Number of Operations.....	288,022

The outstanding piece of work, as we see it, was done in the Hall-Fletcher Junior High School in Asheville. With the cooperation of teachers, principals, Parent-Teacher Associations and local dentists, the mouth of every child in the school was made dentally fit. This is the ideal toward which we are aspiring.

The personnel of this division is composed of one whole-time dental director, one senior-stenographer-clerk, and four regular field dentists, as well as twelve part-time dentists, whose salaries are supplemented by the State Board of Equalization and funds from the counties.

ANNUAL REPORT OF THE NORTH CAROLINA STATE BOARD OF HEALTH TO CONJOINT SESSION, STATE MEDICAL SOCIETY, APRIL 22, 1932

By James M. Parrott, M.D., Secretary and State Health Officer

While I did not want to be State Health Officer and accepted it with real reluctance, I regard my selection as a great distinction and it is deeply appreciated. It is my opinion that the position is the most important and most honorable in North Carolina. It is a great responsibility to lead three and a quarter million people in the ways of health. I am comforted and sustained by the fact that I am supported in these trying days by the doctors of the State. They have always been kind to me and will not fail me now.

The State Board of Health recognized the importance of simplicity in organization and therefore created only five grand divisions and grouped around these all of our activities. Time will not allow me to enter into a detailed discussion of the many duties of each department. For your information, allow me, please, to call your attention to some outstanding facts.

Division of Laboratories. This is directed by Dr. C. A. Shore. It is a well-known fact that there is no better laboratory director, or more skilled scientist in his line of work to be found in this country.

The true value of the work of the State Laboratory of Hygiene could only be estimated if we could determine the number of lives saved and the amount of disease prevented. It is possible to give approximate figures on the important matter of cost of operation and to compare these figures with the amount which our people would have to pay to obtain the same service elsewhere.

In the first nine months of this fiscal year, the laboratory expended less than \$58,000.00. During this period the value of the biologics distributed, and in a major part manufactured, amounted to more than \$550,000.00 at a reasonable retail price. The value of nearly 80,000 diagnostic tests on a private pay basis would amount to more than \$400,000.00. This sum of more than \$900,000.00 does not include all the miscellaneous items of service rendered by the laboratory. The saving to our people in antirabic serum service more than pays the cost of the laboratory each year. The money saved our people by all our laboratory services would pay all the expenses of the State Department for nearly four years.

Dr. Shore is of the opinion that the best piece of work done by the State Laboratory has been the manufacture and free distribution of typhoid vaccine. Unquestionably, the use of this vaccine has been an important factor in improving our typhoid fever situation.

The laboratory continues its work in making and distributing vast amounts of all needed biologics, water analyses, diagnostic tests and sanitary investigations so much needed for the health and economic progress of a great, forward-looking people. The activities of this division are essential to the physical and material welfare of the State.

The functions of this service can be fairly summarized under five groups:

1. Diagnostic assistance.
2. Water, milk and kindred control service.
3. Manufacture and distribution of biological serums, vaccines, etc.
4. Health education features.
5. Necessary and needed research or investigation work.

Division of Preventive Medicine. This service is under the direction of Dr. G. M. Cooper. The comprehensive grasp of public health problems by Dr. Cooper is so well-known that no words of commendation are needed for him. He is a steadying influence in our department.

The activities of this division comprise the responsibility for public health education in the State. It includes the issuance of a large amount of general and special literature, and much of a miscellaneous character dealing with every health subject.

This division is charged with the responsibility of our Maternity and Infancy Service, the extent of which is indicated by the fact that we find it necessary, in order to meet requests, to prepare and mail an average of 24,000 copies of pamphlets monthly relating directly to the care of infants, children and women. Much of this literature is regarded as the best that can be obtained in the United States. From this service there is mailed to midwives and physicians more than 800 packages of silver nitrate monthly.

This division carries the work of school health supervision. When we recall that there are nearly 900,000 school children in North Carolina we cannot but be impressed with the importance and difficulties of this particular service. I do not mean to say that we reach all of them each year but I am saying that we are fighting hard to do so and our only reason for being able to touch them only once in three years is explained by lack of proper financial support.

Dr. Cooper handles nearly all of the individual health service correspondence. Most of the inquiries regarding personal medical and hygiene subjects are answered by him. It is impossible in anything like a reasonably short report to detail, with any degree of satisfaction, the variety of duties of Dr. Cooper. He and his work are so well-known that I content myself with these citations.

Division of Sanitary Engineering. Mr. Warren H. Booker, the director of this division, came to the service with a ripe, broad experience in his profession. He was well-known in public health work when selected and had rendered outstanding service with the Board as its first sanitary engineer. During that time he laid the foundation on which our splendid superstructure has been builded.

Mr. Booker's work has been made unusually difficult because of the necessary reduction of personnel for financial reasons, from 26 employees to 13. No service can fail to be seriously affected by a reduction of fifty per cent.

The work of this division embraces most non-medical activities of the Board including among other things, water supplies, sewage disposal, milk sanitation, shellfish sanitation, hotel and cafe, summer camp and roadside sanitation, as well as enforcement of the bedding and privy law.

Mr. Booker and his co-laborers travel more than 6,150 miles per month. For the period of July 1, 1931, to March 31, 1932, inclusive, among other things, more than 55,000 privies were inspected, improved and built. During this time, it has been found necessary to prosecute only in five instances, a striking testimonial to the ability of our sanitary service to bring things about in a peaceful, quiet manner.

During the nine months which have just past, a total of 1,528 septic tanks were inspected, improved and constructed. Nearly 2,000 inspections of hotels and cafes have been made. During that time, dairy inspections and rating and laboratory service to an amount of practically 3,000 have been performed. This does not include the Milk-for-Health Campaign and a variety of veterinarian services. Bedding inspection and school inspections will run probably more than 2,000. During the nine months period approximately 12,000 water supplies have been serviced. Much necessary work has been devoted to sanitary conditions of jails, county prison camps, and highway prison camps. This division has been of considerable value to the Vital Statistics Bureau by visits and conferences with registrars, undertakers, doctors and midwives. To all this has been added a miscellaneous group of activities such as summer camps, private homes, special investigations, typhoid fever conferences, plumbing and heating examinations, inspection of State institutions, and that very difficult, highly complicated, and valuable work from both an economic and health standpoint, the study of industrial waste.

The Board recognized the necessity for veterinary service and employed Dr. M. E. Coyle for this important work. The veterinary surgeons of North Carolina, though few in number, are an intelligent and outstanding group of professional men. They are rendering a valuable public health service.

Division of Dentistry. Appreciating the importance of dentistry in public health work, at its first meeting, the Board raised our dental activity of the dignity of a division. Dr. E. A. Branch is director of this service. Just here let me express my deep appreciation to the dentists of North Carolina for their scientific conception of health values and for their enthusiastic and loyal support.

The staff of this division consists, in addition to the director, of eleven white and two negro dentists. During the recent nine months mouth health campaigns have been conducted in thirty-three counties. The large number of treatments which have been given have been for teaching health by demonstration. There is no question but that interest in mouth health education is rapidly increasing in North Carolina. The practical value of this service is outstanding. Our limited appropriation could not possibly carry this largely increased activity were it not for the fact that Dr. Branch has been able to persuade other governmental agencies and private interests to contribute several thousand dollars to this work.

Division of County Health Work and Epidemiology. I do not mention this last because it is of least importance. Neither of our divisions are of least or greatest importance. They are all stars and stars of equal magnitude and glory.

Dr. John H. Hamilton is director of this activity. He came to the department the first of September, 1931. His ability justifies his national reputation. During his public health career while serving with the International Health Board he instituted the county health work for another great State. While on a special mission in North Carolina his ability was discovered, and he was persuaded to take charge of an important and strategic local health unit. He is one of the most unselfish men of whom I have any knowledge. When I suggested his salary he simply said, "Let's not discuss salary. I am interested in public health because of the service which I can render."

A detailed citation now of the services of this division would require too much time. Its name indicates its duties fairly well. The division handles nearly 2,000 letters a month, both circular and dictated. The director travels probably 900 miles a month. In addition to conferences, rendering expert advice, radio talks, field investigations, Dr. Hamilton is responsible for performing that most difficult duty which I denominate as "persuasion service." This includes convincing local authorities that they should improve their health work and persuading the inauguration of local health activities where none exists.

Forty-nine counties have whole-time employees though only thirty-five have a whole-time health department and only sixteen have a standard minimum four-unit health service. As indicated by its title, this division is charged with the responsibility of assisting and advising with the local whole-time and part-time organizations and workers.

Our whole-time and part-time local health workers are loyal and earnest, and are battling like noble sons of Zeus against almost insurmountable obstacles for the improvement of mankind and the betterment of living conditions in North Carolina. Without our local health departments our health program would be greatly hampered, if indeed it did not collapse. Many times visitors from a distance and students have praised the doctors of North Carolina in extravagant terms and paid high tribute to the intelligence and earnestness of our local health workers. This has brought me much satisfaction.

The epidemiological work of this division is very great. It is a great and far-reaching responsibility. This service alone is enough for any one man to direct. We hope to get an outside agency to help us in carrying the burden of epidemiology.

The Board of Health in October, 1931, realized the impossibility of Dr. Cooper carrying longer the Bureau of Vital Statistics, and transferred this activity to the Division of County Health Work and Epidemiology. Dr. R. T. Stimpson of Yadkin County was selected to head this division. He came to the service in January, 1932. He has rapidly grasped his duties and has shown himself to be a man of ability. In addition to the routine work, both interpretative and clerical, the Vital Statistics Division has to handle more than 36,000 letters, blanks, cards for deaths, births, reportable diseases, certificates, transcripts to and from Washington, automobile accident cards, etc., each month. This service is made possible, to a large extent, by funds which are now being obtained from the Federal Government for registration purposes.

In spite of our large correspondence and great amount of literature distributed, and of miles traveled and laboratory service now being rendered and of records now being handled, we are not able to meet even the unsolicited demands of our industries and our people. We cannot carry on as effectively and as reasonably well as we should because of lack of financial support.

Board Policies

Rapid increase in public health knowledge, together with the desperate and fast changing economic conditions of our people and almost revolutionary reversals of attitudes of the people and the profession, make it impossible to outline with anything like fixedness and definiteness adequate policies. Indeed, I raise the question, "Is it wise to have fixed policies even though it is necessary to have a fixed point to which one should go?" After all, it is not so much the method of travel as it is the purposes which motivate and the direction one is going which count. I am grateful that our Board of Health is sufficiently elastic and possesses such a high degree of intelligence as will always keep it moving and changing, but always and ever for the better.

At this time the following are the policies of this Board:

1. The State Board of Health is not primarily a law-enforcement agency, and when conditions compel, or the statutes require it to do so, such work will be considered only as incidental and not as a general policy. We believe in the power of persuasion and have faith in the ultimate desire and purpose of all, professional and lay alike, to do the right thing once the right and wise thing is determined. North Carolinians are so constituted that they cannot be compelled to do a thing. They must be persuaded.

2. The State Department of Health is not a curative agency, and when, under unusual conditions, it may be necessary to engage in treatments, such activity will be only incidental and never a policy. Immediately on assuming the duties of this responsible position I advised certain state activities, local governmental units and individuals that treatments by public health service would not be approved. The result of this has been that a large amount of legitimate work has been turned from government to the physicians and dentists of the State. I am sure that you appreciate and value this attitude.

I recognize the fact that doctors are pressed on every side as never before with all sorts of reasons and all kinds of excuses for rendering free service. In refuting these we must not swing too far in the other direction and allow ourselves to forsake the time-tried and time-proven ideals which are the proud heritage of us all. It is my judgment that the physicians are fairly entitled and in wisdom should, within due bounds of propriety, seek self-preservation in so far as such would be compatible with the discharge of our high and sacred responsibility. Admittedly, the doctors are going and have gone too far into the domain of state medicine. For this I have the grave suspicion that the profession itself is more responsible than any one else. The practice of medicine is not a hireling's job. Neither is it a job to be farmed out or controlled, either through finances or otherwise, by any agency what-

ever. Too many groups, under the guise of charities, fraternal organizations, churches, corporations, lumber camps, plantations and governmental and other agencies, are encroaching on the legitimate field of financial reward of the profession. The medical man cannot much longer survive this inroad. The time has come for us all, and that too in no unmistakable terms, to say to such, "Thus far, but no further shalt thou go." In accordance with this conception the State Board of Health has definitely decided to withdraw from the field and to discontinue, so long as possible, the so-called "Tonsil and Adenoid Clinics." No apology is offered for beginning them. They have served well their educational purpose. Just a word of warning here. There are agencies, organizations and individuals, both medical and otherwise, who are insisting that some method shall be devised for the correction of the physical defects of children. This insistence is right and wise and is justified in the high court of humanity. The State Board of Health having retired from the field on the theory that curatives is the function of others, it now rests with the physicians of North Carolina to determine what they will do about it. I have the temerity to suggest to you that the people of the State now know as they have never known before what was correctly stated by Oliver Wendell Holmes when he said that if you wish to improve a man you must start with his grandfather, and they are coming more and more to think that the way to improve the grandfathers of the years to come is to start with the children now.

3. The State Department of Health is not a diagnostic agency. We accept the diagnoses made by physicians. When it may be deemed advisable to make a diagnosis, such may be done only as a courtesy to or at the request of doctors, or when definitely indicated to protect the public health. An elucidation of this attitude, I take it, is unnecessary, and I therefore present it to you on its undiscussed merits.

4. Only in part is the State Board of Health a health promotion agency. By this is meant the State Department of Health will warn that certain symptoms mean danger and that a doctor should be consulted. This is the field in which public health officials and doctors must labor and labor in harmony. Both have a definite responsibility here. Let me illustrate: It is clearly the part and duty of the public health servant to warn the expectant mother that a rocking headache may mean danger, and urge her to consult a physician. It is not the duty of the public health servant to walk with the woman through the Valley of the Shadow. However, it is his function to meet her on the other side and say to her again that her postnatal care is important and that her precious offspring must be protected against transmissible diseases. We must learn to work together. We must have faith in each other. We must have an abiding confidence in the ultimate and underlying purposes of each other. The doctor has his field, the health officer has his field, and they each need the other. There must be no delay by squabbling over misunderstandings and minor details while disease spreads and human life is endangered. The public has reached that point when it is not so much concerned about men or their attitudes toward each other. The public is enormously concerned about the results. The question is not

whether some one else is at fault or intruding on personal rights; the question of this practical hour is, "Can you deliver the goods, and do it now?" There are two things which surpass my limited understanding. First, church fusses in the very atmosphere of the doctrine of the Brotherhood of Man and the Fatherhood of God. And second, misunderstanding and time wasted in petty quarrels by men who are engaged in the great and solemn undertaking of relieving suffering humanity. The public health service in North Carolina is of tremendous help to the medical and dental professions, and in turn these professions are of much help to public health service. Let us labor in the field of health promotion together as one harmonious whole, keeping in mind for ever that we are all journeying in the same direction and to the same high place.

5. The State Board of Health is primarily an agency for the prevention of disease, public health education, sanitation, expert health advice, laboratory activities, immunization, oral hygiene, control of epidemics and transmissible disease, county health activities, medical inspection of schools.

The State Health Department has certain conceptions of its duty in the field of immunization, and I think its ideas may be fairly stated as follows:

1. It is the responsibility of health departments to make every reasonable effort to control communicable diseases within their jurisdiction.

2. The method of procedure, except as prescribed by laws, rules and regulations, should be wisely left largely to the discretion of local communities and whenever communicable diseases are confined to or clearly will not spread beyond the jurisdiction of the local health service; and that the State Department of Health should assume full responsibility of control, either directly or through local agencies, when such communicable diseases have actually become or will probably become inter-county. The health department should be very cautious in transferring any part of its immunization program to any private agency without having first satisfied itself as to the completeness, effectiveness and ability of such agency to properly discharge the immunization program. To a thinking man, in my opinion, it is definitely the part of wisdom as well as the solemn duty which it cannot shirk and of which it should ever be mindful, of every health department, both State and local, to reserve unto itself the right to pass judgment upon the effectiveness of any immunization service carried on by any unofficial agency over which it has no control. To assume any other attitude than this is unsound health policy, unwise attitude for public protection, and would be in effect a surrender to others, whether it be professional or otherwise, of a vital function. When a private agency relieves the health department of the responsibility for the control of communicable diseases by immunization or in any way, it should be done with the definite understanding of the situation and with the further knowledge that the health department does not forfeit its right to use immunization methods whenever indicated or necessary for the purpose of preventing or controlling communicable diseases when and if the non-health agency fails to perform its assumed function of immunization with that thoroughness and

permanence which makes for effective work, or when it is clear before the assumption of responsibility for immunization by other agency than the public health service, it is foredoomed to defeat by the plan, method, or inability of the agency to carry on the service.

For purposes of clarification I think the matter can be fairly stated in this way: When in the management of communicable diseases doctors, if and when mindful of the public health, should direct and that the health officer should aid the doctor as the doctor may desire or the public weal demand. When in the exercise of immunizations for the purpose of controlling communicable diseases, such control being distinctly and definitely a public health function, the health service should lead and the physician should aid. However, the physician, in justice to himself and the people, cannot avoid his clear duty to press immunization of the children of his patrons. It has been my experience that but few doctors fail to recognize their public responsibility, and with this idea in view it is my conception that whenever a local medical fraternity desires to do so and definitely expresses such purpose, and will clearly state in unmistakable terms its wish to handle local immunizations, thoroughly and completely, for their communities, that they exercise this function. But when the physicians do not do so or do not indicate their desire to do so, the public health service, in the discharge of its solemn and clear obligation, must assume and will assume that function.

I hope that there may be no misunderstanding about immunization or misinterpretation of the above stated attitude. The State Health Department is very desirous of regarding the wishes of the doctors of North Carolina and of following their leadership when they properly and fairly assert it. When they do not do so the health department must act. I am now mindful to say in this connection that if our doctors do not regard the above stated policy as the proper and wise one, the State Board of Health will be very pleased to discuss the matter in detail for the constructive purpose of reaching some satisfactory solution.

All of us, professional and lay alike, would be happier if we would but realize that in the shifting order of things and in man's groping for the light, frail as he is and feeble though his efforts be, we have now come to the time when we are moving and living in the atmosphere of a new social philosophy which, in the language of Angel, "Conceives social order as under binding obligation to give its members wholesome conditions of life, protection from needless exposure, whether to climate or disease or moral depravity. It conceives human life as indisputably superior to money or other physical property in any form, and it is disposed to suppress or radically modify any agencies or practice which appears to be exploiting man for the promise of merely financial or material gain."

It is my opinion that any group, whether it be official or unofficial, governmental or otherwise, which undertakes to have any other conception of life's duties than that expressed in the field of service and work for the common good, will eventually be destroyed, and those who take the view that "I shall receive all and give none" will become as dead as the Dead Sea. It is written in the Book of Life by the unconquerable

Fates that the one who lives for self alone and unmindful of others shall be destroyed and that the one who labors for mutual good shall survive. It has never been possible, and it is certainly not so now, when we can safely disregard the lesson of the Good Samaritan and be unmindful of the deep and underlying human philosophy that I am, after all, responsible for my brother's condition. All of this I state here and now, not as a criticism or even as a warning. I state it as my conception of what will bring success in this tragic age.

Achievements and Difficulties. The figures which I have given above and the facts which I have cited sound large, and they are. Indeed, they are stupendous. They are amazing, but then North Carolina is a tremendous State. It is as large as England, which rightfully boasts that it was the proud mistress of the sea. We have many people to serve. Our industries and enterprises are multitudinous; our interests are many and varied; our climate runs from the semi-tropical to the cold. All these so greatly multiply our work that even though, in detail, the activities seem great, they are really very small in comparison to the requirements. Our work has been made possible by several factors. **First.** The predecessors of the present State health officials laid a broad and deep foundation and builded on it a matchless superstructure in which we now labor. To them should go great honor and great glory. **Second.** The work has been accomplished by self-sacrificing on the part of our co-laborers each of whom is fired by a holy zeal for service.

I am sure that the tolerant and appreciative people of North Carolina will overlook our shortcomings in view of the fact that our State appropriation has dropped from \$486,000 in 1929 to \$263,647 now available. I remind our people that were it not for the assistance which we get from the International Health Board, the U. S. Public Health Service, the Rosenwald Fund, life insurance companies and other private agencies and particularly the Parent-Teacher Association, we would be compelled to fold our tents and solemnly and shamefully slip away. We are begging! Yes, and it is humiliating too; but I'll beg for the sake of this service.

In calling your attention to our financial distress I do not mean to complain. On the other hand I am grateful to our overburdened taxpayers for the real sacrifice which they are making to carry on their own great work. Solemnly do I promise them to be mindful of their efforts even in the expenditure of a postage stamp.

The Budget Bureau is doing its very best, in so far as the limited funds of the State will permit, to reduce our crippling to a minimum. We are co-operating to the extent of our ability, and with a sympathetic understanding, with the Budget Bureau in its very desperate effort to preserve the credit of the State and relieve the taxpayers by balancing the budget. However, in any scheme for economy, it must be remembered that there are certain things which are essential for the preservation of our State, and therefore must be preserved even at the expense of desirable or even much needed non-essentials.

Public health is of prime importance in any civilization. It is the outstanding spiritual, and its activities must be held inviolable and be

unhindered and unhampered. I cannot follow that line of thought which contends that it is wise to protect non-essentials, even though really needed, at the expense of the most necessary of all secular social activities.

I hold it to be fundamental in governmental wisdom to distribute tax money in accordance to the needs and efficiency of service.

We cannot justify expending, as individuals, nearly six times as much for funerals and tombstones as we contribute in the form of public support to health service.

Good health is a debt eternal to the next generation. It is a horrible thing to project the baneful effects of the present depression into those who follow. This financial distress will sooner or later pass away, but the effects of stinginess in public health service will go on and on. It is imperative that the children of today suffer not a bit in body or mind if they meet with success the problems which we will transmit to them.

Amelioration or prevention of human suffering, though that is of the greatest importance, does not tell the whole story of public health service. Our industries look to the health department to protect them and to provide for them strong and willing workers. No thoughtful man will invest or continue an investment in unhealthy surroundings.

It is utterly impossible to develop a Class A commonwealth out of Class B people.

Solemnly do I warn North Carolinians against that day which will surely come should the present delimitations of public health service be much longer continued, when disease, which is growing much less now because of efforts of yesterday, will again begin its onward march and strike to death or seriously impair our people and cripple our industries.

It is wise, too, that the people of North Carolina right now understand that the old order of things in which we thought in terms of saving human life alone is passing away. The new conception is that public health service is an agency that should go further than merely saving a life and should increase the efficiency of those who live. The philosophy which declares for the right of the little man to live is fine, but much grander and nobler and infinitely more challenging is that philosophy which declares for the right of all the sons and daughters of men to live life more abundantly.

I remind you that we are meeting here in the midst of the greatest and most far-reaching, the most devastating, depression that the world has known in a hundred years. Fortunes shifted away; hopes blasted; hearts broken; homes wrecked everywhere, and yet the storm does rage. These times demand more public health service than ever before. We must grasp the only safe anchorage left, the anchorage of health and courage and faith; faith in ourselves, faith in each other, and faith in God.

If we sacrifice our public health now we will lose our grip on ourselves, we will continue in this wilderness through which we are now groping in moral, physical and financial darkness for years and years to come.

Now for high hearts! Hold ideals and the blessed determination to travel the ways of service and nobility of sacrifice!

I will not weary you with a recitation of statistics or detailed statements of the multitude of things which we have accomplished, but I cannot forego the pleasure of stating that North Carolina today is healthier than it has ever been before, thanks to the efforts of those who preceded us. It has the lowest death rate, with the possible exception of one State, of all the States east of the Mississippi. The provisional rate from all causes exclusive of still-births in 1931 was 10.3, and from all causes exclusive of still-births, homicides and accidents, over which public health has no control, was 9.8.

In 1914 tuberculosis, typhoid fever and diphtheria caused an aggregate of 4,471 deaths and gave a rate of 191 per 100,000. In 1931 these three diseases were responsible for only 2,648 deaths, with a death rate of 82.3. Had the 1914 rate prevailed last year these diseases would have caused 6,144 deaths instead of 2,648, and they would have caused 30,000 more cases of sickness than was actually experienced. In other words, had the same rate prevailed in 1931 as in 1914 there would have been an average of thirty-five funerals more in each county from these three diseases alone than actually happened. Fairness impels me to say that the major fight against tuberculosis was begun by Dr. L. B. McBrayer and is being led by Doctors McBrayer and McCain, and to them and their splendid service and co-laborers goes great credit.

I cannot forego the temptation of calling your attention to a striking and parallel comparison. The death rate in five cities in North Carolina which have ample protection by standard milk ordinance and well regulated water supply, in 1925 from typhoid fever was 8.6. In 1930 it had dropped to 2.7, and that too in the face of the fact that these cities, being more or less medical centers, contain large institutions which attract patients from a distance. The probability is had not these cities been credited with deaths from diseases which were imported the rate would have been two or less. On the other hand, in 1930 the death rate from typhoid fever was 12.7 in five rural, sparsely settled counties which had no standard milk ordinance or sanitary water supply. I give you another striking illustration of the value of health service whether rendered by public agency or private individual: the death rate in North Carolina from diarrhoea and enteritis under two years was 81.2 in 1914. It dropped to 22.1 in 1931. Fairness impels me to say that the greatest single factor in this reduction of death rate is the physicians in North Carolina and their valuable and incomparably fine service in health activity.

In conclusion allow me to say that so long as 65,000 people in North Carolina are sick every day of transmissible diseases, an unestimated number of physical defects being projected into the morrow, and a vast number of our citizens more or less physically and mentally deficient, we cannot rest from our labors but must press on. Some time ago a distinguished member of this society in a letter to me stated: "We go not to battle. We go to War!" That's the thing. We go to WAR. This is not a campaign. It is more than that. It is a conflict which must be waged with unrelenting and ceaseless vigor through all the days. Were I not cognizant of the fact that I am sustained by the power of

the medical and dental professions, the sanitary engineering profession, and the sympathetic co-operation of organizations like the Parent-Teacher Association and the co-operative spirit of all our people, I would be disconsolate indeed and hopeless in thought as I view the outlook and see the necessities.

I have a right to appeal specifically and with confidence to the doctors of North Carolina to support the State Board of Health. It is the collective contribution of the medical profession to civilization. Its function was conceived by them. They gave it birth. They nurtured it while it wore its swaddling clothes, and they will nurse it now as it toddles about in its infancy. Men of medicine! The State Health Department is yours, not by accident of discovery or the power of the broad sword of bloody conquest, it is yours by the divine right of creation, but it is yours to be administered through the agency of the State for the good of all the sons and daughters of men. I need you in this trying hour, when the souls of all are sorely tried. I know the tremendous difficulties under which you are laboring. I know that you cannot much longer carry the tremendous charity load and public health service which you are bearing, but I beg you to take courage and to carry on. The greatest thing about our State is not its unexcelled climate, its scarcely equaled mountain scenery, its remarkable natural resources, the roar of its ocean side, the beauty of its sounds, the gorgeous settings of its streams, its many factories or, indeed, the number of its citizenship, but in the quality of its people. Never has the State called on its men and women and called in vain. It is calling today just as it did in tragic times of past, and just so surely as answered our forebears in stress of war so, too, will we stand by the Commonwealth. I have faith that we shall answer.

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